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IDENTIFIERS	*Convention of American Instructors of the Deaf

ABSTRACT

Presented are proceedings of the 45th meeting of the Convention of American Instructors of the Deaf, 1971, including numerous papers and discussions on the multiply handicapped, vocational education, libraries, principals and supervising teachers, curriculum, Federal programs, day programs, post secondary programs, reading and language, preschool, mathematics, communication, educational media, coaches and physical education, audiologists, and teacher preparation. Papers concern such topics as the establishment of a multiple response repertoire for noncommunicating deaf children, the organization and administration of parent education at the Carver School for the Deaf, individualizing curricula through the use of instructional packages, the role of the paraprofessional, and a community service volunteer program for students at the National Technical Institute for the Deaf. Also considered are computer-assisted instruction in language, early intervention programs, the management of deaf children from birth to 3 years of age, orosensory perception in the deaf, a doctoral program at Syracuse University in instructional technology for education of the deaf, and the present status of physical education and sports programs in residential schools for the deaf. (GW)

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2d Session } { No. 92-75

REPORT

OF THE

PROCEEDINGS OF THE FORTY-FIFTH MEETING OF THE CONVENTION OF AMERICAN INSTRUCTORS OF THE DEAF

ARKANSAS SCHOOL FOR THE DEAF

Little Rock, Arkansas

CONVENTION THEME

"More Opportunities for Deaf Children"

JUNE 25–JULY 2, 1971

Ordered to be printed with illustrations

U.S. GOVERNMENT PRINTING OFFICE
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EC 050 276 E

U.S. DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
OFFICE OF EDUCATION
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S. Con. Res. 41 Agreed to May 9, 1972

Ninety-second Congress of the United States of America

AT THE SECOND SESSION

Begun and held at the City of Washington on Tuesday, the eighteenth day of January, one thousand nine hundred and seventy-two

Concurrent Resolution

Resolved by the Senate (the House of Representatives concurring), That the report of the proceedings of the forty-fifth biennial meeting of the Convention of American Instructors of the Deaf, held in Little Rock, Arkansas, from June 25, 1971, through July 2, 1971, be printed with illustrations as a Senate document. Five thousand five hundred additional copies of such document shall be printed and bound for the use of the Joint Committee on Printing.

Attest:

Francis R. Valeo

Secretary of the Senate.

Attest:

W. Pat Jennings

Clerk of the House of Representatives.

LETTER OF TRANSMITTAL

GALLAUDET COLLEGE,
OFFICE OF THE PRESIDENT, KENDALL GREEN,
Washington, D.C., July 2, 1971.

Hon. SPIRO T. AGNEW,
President of the Senate,
Hon. CARL ALBERT,
Speaker of the House.
To the Congress of the United States:

In accordance with the act of incorporation of the Convention of American Instructors of the Deaf, approved January 26, 1897, I have the honor to submit the proceedings of the 45th meeting of the Convention, held at the Arkansas School for the Deaf, Little Rock, Arkansas, June 25–July 2, 1971, inclusive.

I have the honor to be,

Very respectfully,
Your obedient servant,
Edward C. Merrill, Jr.,
President.

LETTER OF SUBMITTAL

California School for the Deaf,
Riverside, Calif., July 19, 1971.

Dr. Edward C. Merrill, Jr.,
President, Gallaudet College,
Washington, D.C.

Dear Sir: In accordance with section 4 of the act of incorporation of the Convention of American Instructors of the Deaf, approved January 26, 1897, a report is to be made to Congress, through the president of Gallaudet College at Washington, D.C., of "such portions of its proceedings and transactions as its officers shall deem to be of general public interest and value concerning the education of the deaf."

In agreement with the above request, I have the honor to submit herewith a comprehensive report containing such papers and addresses as may be of special interest or of historic value, all of which were presented at the 45th meeting, held at the Arkansas School for the Deaf, Little Rock, Ark. June 25–July 2, 1971, inclusive.

May I respectfully request that this report be laid before Congress.

Very truly,

Gerald Burstein,
Secretary-Treasurer.

FOREWORD

The published proceedings of the Convention of American Instructors of the Deaf, dating from the time the organization was established in 1850 to the present, contain an almost complete history of the development and progress of the education of the deaf in America. This report of the proceedings of the 45th Convention held at the Arkansas School for the Deaf in Little Rock, June 27–July 2, 1971, adds another chapter of interest to educators of the deaf and to their associates in allied fields. The *Proceedings* contains all the addresses, papers and other material which can be presented in printed form. The proceedings of the business meetings and general sessions are carefully recorded. Papers and summaries are secured where possible from section meetings and from workshops.

While the 45th meeting of the Convention of the America Instructors of the Deaf Convention has met at the Arkansas School in Little Rock, the Arkansas School has hosted meetings of the sister organization, the Conference of Executives of American Schools for the Deaf.

The editor and associate editor of the *Proceedings* wish to express their appreciation to the following people who assisted in the preparation of this volume:

To Mr. Roy G. Parks, Superintendent, Arkansas School for the Deaf, Little Rock, for providing space and facilities for the editorial offices, and for making the contacts which resulted in the required concurrent resolution for producing these proceedings.

To Dr. Kenneth R. Mangan, the immediate past president of the Convention of American Instructors of the Deaf and to Dr. Armin G. Truechek, his successor, for their suggestions and approval of various arrangements made by the editor.

To Mr. Jack W. Brady, Superintendent, Kentucky School for the Deaf, who as program chairman, made the necessary arrangements to obtain papers and other material for publication in these proceedings.

To Mr. Albert B. Davis, stenotypist of Jefferson City, Missouri, for his efficient attention to all details, and for his excellent suggestions regarding the organization and presentation of the material. Mr. Davis has served as stenotypist for the Convention for more than twenty years.

To Miss Ferne E. Davis and Mr. Arthur G. Norris for their assistance in preparing material for the printers.

To. Mr. John Coder, Senate Rules Committee and to Mr. Michael Blake and Mr. Donald Casey, Office of the Secretary of the Senate, for their continuing patience, consideration and advice during the correction of proof, the indexing, the printing and binding of these proceedings.

Respectfully,

WILLIAM J. MCCLURE, *Editor.*
HOWARD M. QUIGLEY, *Associate Editor.*

ACT OF INCORPORATION

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That Edward M. Gallaudet, of Washington, in the District of Columbia; Francis D. Clarke, of Flint, in the State of Michigan; S. Tefft Walker, of Jacksonville, in the State of Illinois; James L. Smith, of Faribault, in the State of Minnesota; Sarah Fuller, of Boston, in the State of Massachusetts; David C. Dudley, of Colorado Springs, in the State of Colorado; and John R. Dobyns, of Jackson, in the State of Mississippi, officers and members of the Convention of American Instructors of the Deaf, and their associates and successors, be, and they are hereby, incorporated and made a body politic and corporate in the District of Columbia, by the name of the "Convention of American Instructors of the Deaf," for the promotion of the education of the deaf on the broadest, most advanced, and practical lines, and by the name it may sue, plead, and be impleaded, in any court of law, or equity, and may use and have a common seal and change the same at pleasure.

Sec. 2. That the said corporation shall have the power to take and hold personal estate and such real estate as shall be necessary and proper for the promotion of the educational and benevolent purposes of said corporation, which shall not be divided among the members of the corporation, but shall descend to their successors for the promotion of the objects aforesaid.

Sec. 3. That said corporation shall have a constitution and regulations or bylaws and shall have the power to amend the same at pleasure: *Provided*, That such constitution and regulations or bylaws do not conflict with the laws of the United States or of any State.

Sec. 4. That said association may hold its meetings in such places as said incorporators shall determine and shall report to Congress, through the President of the Columbia Institution for the Deaf and Dumb* at Washington, District of Columbia, such portions of its proceedings and transactions as its officers shall deem to be of general public interest and value concerning the education of the deaf.

Approved, January 26, 1897.

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*Now named Gallaudet College.

MEETINGS OF THE CONVENTION OF AMERICAN INSTRUCTORS OF THE DEAF

First—New York, N.Y., August 28–30, 1850.
Second—Hartford, Conn., August 27–29, 1851.
Third—Columbus, Ohio, August 10–12, 1853.
Fourth—Staunton, Va., August 13–15, 1856.
Fifth—Jacksonville, Ill., August 10–12, 1858.
Sixth—Washington, D.C., May 12–16, 1868. (Also called the "First Conference of Superintendents and Principals of the American Schools for the Deaf.")
Seventh—Indianapolis, Ind., August 24–26, 1870.
Eighth—Belleville, Ontario, July 15–20, 1874.
Ninth—Columbus, Ohio, August 17–22, 1878.
Tenth—Jacksonville, Ill., August 26–30, 1882.
Eleventh—Berkeley, Calif., July 15–23, 1886.
Twelfth—New York, N.Y., August 23–27, 1890.
Thirteenth—Chicago, Ill., July 17, 19, 21, 24, 1893.
Fourteenth—Flint, Mich., July 2–8, 1895.
Fifteenth—Columbus, Ohio, July 28–August 2, 1898.
Sixteenth—Buffalo, N.Y., July 2–8, 1901.
Seventeenth—Morganton, N.C., July 8–13, 1905.
Eighteenth—Ogden, Utah, July 4–10, 1908.
Ninteenth—Delavan, Wis., July 6–13, 1911.
Twentieth—Staunton, Va., June 25–July 3, 1914.
Twenty-first—Hartford, Conn., June 20–July 3, 1917.
Twenty-second—Mount Airy, Pa., June 28–July 3, 1920.
Twenty-third—Belleville, Antario, June 25–30, 1923.
Twenty-fourth—Council Bluffs, Iowa, June 29–July 4, 1925.
Twenty-fifth—Columbus, Ohio, June 27–July 1, 1927.
Twenty-sixth—Faribault, Minn., June 17–21, 1929.
Twenty-seventh—Winnipeg, Manitoba, June 22–26, 1931.
Twenty-eighth—West Trenton, N.J., June 18–23, 1933.
Twenty-ninth—Jacksonville, Ill., June 17–21, 1935.
Thirtieth—New York, N.Y., June 20–25, 1937.
Thirty-first—Berkeley, Calif., June 18–23, 1939.
Thirty-second—Fulton, Mo., June 23–27, 1941.
Thirty-third—St. Augustine, Fla., June 16–20, 1947.
Thirty-fourth—Jacksonville, Ill., June 19–24, 1949.
Thirty-fifth—Fulton, Mo., June 17–22, 1951.
Thirty-sixth—Vancouver, Wash., June 28–July 3, 1953.
Thirty-seventh—West Hartford, Conn., June 26–July 1, 1955.
Thirty-eighth—Knoxville, Tenn., June 23–28, 1957.
Thirty-ninth—Colorado Springs, Colo., June 28–July 3, 1959.
Fortieth—Salem, Oreg., June 25–30, 1961.
Forty-first—Washington, D.C., June 22–28, 1963.
Forty-second—Flint, Mich., June 21–25, 1965.
Forty-third—West Hartford, Conn., June 25–30, 1967.
Forty-fourth—Berkeley, Calif., June 21–27, 1969.
Forty-fifth—Little Rock, Ark., June 25–July 2, 1971.

LIST OF PRESIDENTS

1. Christopher Morgan, New York.
2. Thomas Day, Connecticut.
3. John W. Andrews, Ohio.
4. James H. Skinner, Virginia.
5. Rev. J. M. Sturtevant, Illinois.
6. Harvey P. Peet, New York.
7. Rev. Collins Stone, Connecticut.
8. W. W. Turner, Connecticut.
9. Rev. Dr. A. L. Chapin, Wisconsin.
10. Edward Miner Gallaudet, District of Columbia.
11. Philip G. Gillett, Illinois.
12. Warring Wilkinson, California.
13. Philip G. Gillett, Illinois.
14. Wesley O. Connor, Georgia.
15–20. Edward Miner Gallaudet, District of Columbia.
21–23. Percival Hall, District of Columbia.
24. Newton F. Walker, South Carolina.
25. John W. Jones, Ohio.
26. Frank M. Driggs, Utah.
27. Elbert A. Gruver, Pennsylvania.
28. Thomas S. McAloney, Colorado.
29. Alvin E. Pope, New Jersey.
30. Harris Taylor, New York.
31. Ignatius Bjorlee, Maryland.
32. Elwood A. Stevenson, California.
33. Clarence J. Setttles, Florida.
34. Leonard M. Elstad, District of Columbia.
35. Mrs. H. T. Poore (Ethel A.), Tennessee.
36. Daniel T. Cloud, New York.
37. Truman L. Ingle, Missouri.
38. James H. Galloway, New York.
39. Edward R. Abernathy, Ohio.
40. Richard G. Brill, California.
41. Roy M. Stelle, New York.
42. Lloyd A. Ambrosen, Maryland.
43. Stanley D. Roth, Kansas.
44. Marvin B. Clatterbuck, Oregon.
45. Kenneth R. Mangan, Illinois.

OFFICERS OF THE CONVENTION OF AMERICAN INSTRUCTORS OF THE DEAF (1971-73), AND THE STANDING EXECUTIVE COMMITTEE

President.—Armin G. Turechek, Colorado School for the Deaf.
President Elect.—Jack W. Brady, Kentucky School for the Deaf.
First Vice-President.—Robert T. Dawson, Florida School for the Deaf and Blind.
Second Vice-President.—Warren W. Fauth, California School for the Deaf, Riverside.
Secretary-Treasurer—Gerald Burstein, California School for the Deaf, Riverside.
Executive Secretary—Howard M. Quigley, Washington, D.C.

DIRECTORS

(The directors, with the officers, and the immediate past president, form the standing executive committee)

Paul Bird, Idaho State School for the Deaf and Blind.
Keith Lange, Oregon State School for the Deaf.
Edward Strieby, Wisconsin School for the Deaf.
M. Martha Lutz, Missouri School for the Deaf.
William J. McConnell, Virginia School at Hampton.
Kennetth Mangan, Illinois School for the Deaf.

OFFICERS OF THE CONVENTION OF AMERICAN INSTRUCTORS OF THE DEAF (1969-71), AND THE STANDING EXECUTIVE COMMITTEE

President.—Kenneth Mangan, Illinois School for the Deaf.
President-Elect.—Armin Turechek, Colorado School for the Deaf.
First Vice President.—Jack Brady, Kentucky School for the Deaf.
Second Vice President.—Robert Dawson, Indiana School for the Deaf.
Secretary-Treasurer.—Gerald Burstein, California School for the Deaf, Riverside.
Executive Secretary.—Howard M. Quigley, Washington, D.C.

DIRECTORS

(The directors, with the officers, and the immediate past president, form the standing executive committee)

4-YEAR TERM

Paul Bird, Idaho School for the Deaf.
Keith Lange, Oregon School for the Deaf.
Edward Strieby, Wisconsin School for the Deaf.

2-YEAR TERM

Carrie Lou Abbott, Texas School for the Deaf.
Charlotte Osborn, Arkansas School for the Deaf.
Marvin B. Clatterbuck, Oregon School for the Deaf.

CONSTITUTION OF THE CONVENTION OF AMERICAN INSTRUCTORS OF THE DEAF

ARTICLE I. NAME

This association shall be called the Convention of American Instructors of the Deaf.

ARTICLE II. OBJECTS

The objects of this association shall be:

First. To secure the harmonious union in one organization of all persons actually engaged in educating the deaf in America.

Second. To provide for general and local meetings of such persons from time to time, with a view of affording opportunities for a free interchange of views concerning methods and means of educating the deaf.

Third. To promote by the publication of reports, essays, and other writings, the education of the deaf on the broadest, most advanced, and practical lines in harmony with the sentiments and practice suggested by the following preamble and resolutions unanimously adopted by the convention in 1886 at a meeting held in Berkeley, Calif.:

"Whereas the experience of many years in the instruction of the deaf has plainly shown that among members of this class of persons great differences exist in mental and physical conditions and in capacity for improvement, making results easily possible in certain cases which are practically and sometimes actually unattainable in others, these differences suggesting widely different treatment with different individuals: it is therefore

"*Resolved*, That the system of instruction existing at present in America commends itself to the world for the reason that its tendency is to include all known methods and expedients which have been found to be of value in the education of the deaf while it allows diversity and independence of action and work at the same time, harmoniously aiming at the attainment of an object common to all; and be it further

"*Resolved*, That earnest and persistent endeavors should be made in every school for the deaf to teach every pupil to speak and read from the lips, and that such efforts should be abandoned only when it is plainly evident that the measure of success attained does not justify the necessary amount of labor: *Provided*, That the children who are given to articulation teachers for trial should be given to teachers who are trained for the work, and not to novices, before saying that it is a failure: *And provided further*, That a general test be made and that those who are found to have sufficient hearing to distinguish sound shall be instructed orally."

Fourth. As an association to stand committed to no particular theory, method, or system, and adopting as its guide the following motto: "Any method for good results; all methods, and wedded to none."

ARTICLE III. MEMBERS

SECTION 1a. All persons actively and directly engaged in the education of the deaf in the United States and Canada may enjoy all the rights and privileges of membership in the association upon payment of the required fees and agreeing to this constitution.

SEC. 1b. Persons engaged in fields of endeavor closely related to the education of the deaf, and persons actively engaged in the education of the deaf in foreign countries, may become associate members of the association upon payment of the required fees and agreeing to the constitution.

SEC. 1c. "Associate members" shall enjoy all the rights and privileges of membership except those of voting and holding office.

Sec. 2. A member or former member of the association who has retired from active service may continue his membership with all the rights and privileges except those of holding office upon payment of the required fees and agreeing to this constitution. If such retired member of the Convention has 25 years of service to the education of the deaf, he may be granted an honorary membership by the executive committee, such membership does not include a subscription to the American Annals of the Deaf.

Sec. 3. Eligibility of applicants for membership shall be determined by the standing executive committee and reported to the association.

Sec. 4. Each person joining the association shall pay annual dues as recommended by the Executive Committee and approved by the association.

Sec. 5. In addition to the annual dues, a registration fee shall be paid by each member registered at each regular meeting of the association. The amount of this fee shall be determined by the standing executive committee. Nonmembers attending the regular meetings of the association shall pay the required registration fee.

Sec. 6. As long as CAID operates a national office headed by an appointed Executive Secretary, applications for membership must be made to the Executive Secretary, who will receive all membership fees and dues. If there is a question about the eligibility of an applicant for membership, the Executive Secretary shall refer the application to the Standing Executive Committee. The Executive Secretary shall perform all the duties formerly assigned to the Treasurer. The Secretary-Treasurer shall retain membership on the Executive Committee and serve as Auditor. Should an Executive Secretary not be employed, the financial duties of the Executive Secretary will return to the Secretary-Treasurer and an Auditor will be appointed by the President.

Article IV. Officers

Section 1. At each general meeting of the association there shall be elected by ballot a president-elect, first vice president, second vice president, secretary-treasurer. The first vice president who is elected at the 1967 meeting shall become president at the 1969 meeting. The president-elect who is elected at the 1969 meeting shall become president at the 1971 convention and each future president-elect shall become president at the conclusion of his term as president-elect. The association shall have five directors, at least three of whom shall be teachers. At the 1969 meeting two directors shall be elected for two year terms and three shall be elected for four year terms. At subsequent meetings vacancies shall be filled as the terms expire. With the immediate past president, these elected officers will form the standing executive committee of the convention. They shall continue in office until the close of the convention program at which their successors are elected, and shall have power to fill vacancies occurring in their body between general meetings.

Sec. 2. The president, with the concurrence of the executive committee, shall designate such sections as seem advisable for the functioning of the association and shall appoint the section leaders thereof.

Sec. 3. The general management of the affairs of the association shall be in the hands of the standing executive committee, subject to the provisions of such bylaws as the association shall see fit to adopt.

Sec. 4. All officers and members of committees must be active members of the association in regular standing.

Sec. 5. The standing executive committee shall make a full report at each general meeting of all the operations of the association, including receipts and disbursements of funds, since preceding meeting.

Article V. Meetings

Section 1. General meetings of the association shall be held biennially, but the standing executive committee may call other general meetings at their discretion.

Sec. 2. Local meetings may be convened as the standing executive committee and the committees on local meetings shall determine.

Sec. 3. Proxies shall not be used at any meeting of the association, but they may be used in committee meetings.

Sec. 4. Notice of general meetings shall be given at least 4 months in advance and notice of local meetings at least 2 months in advance.

SEC. 5. The business of the association shall be transacted only at general meetings, and at such meetings 100 voting members of the association must be present to constitute a quorum.

ARTICLE VI

In the first election of officers held under the provisions of this constitution, said election occurring immediately after its adoption, all duly accredited active members of the 14th meeting of the Convention of American Instructors of the Deaf shall be entitled to vote, said members making payment of their membership fees to the treasurer at the earliest practicable opportunity after he shall have been elected.

ARTICLE VII. AMENDMENTS

This constitution may be amended by an affirmative vote of two-thirds of the members present at any general meeting of the association: *Provided*, That at such meeting at least 150 voting members of the association shall be present.

ARTICLE VIII

Devises and bequests may be worded as follows: "I give, devise, and bequeath to the Convention of American Instructors of the Deaf, for the promotion of the cause of the education of the deaf, in such manner as the standing executive committee thereof may direct," etc.; and if there be any conditions, and "subject to the following conditions, to wit:".

MEMBERS OF THE CONVENTION OF AMERICAN INSTRUCTORS OF THE DEAF

Membership List 1971

Life Member.—Edward R. Abernathy, Columbus, Ohio.

A

Aaron, Rev. James L., Pittsburgh, Pa.
Aasbo, Mrs. Suzanne, Brooklyn, N.Y.
Abbot, Mrs. Jenny, Wilton, N.H.
Abbott, Mrs. Carrie, Austin, Tex.
Abbott, Virginia, Ronkonkoman, N.Y.
Abbruzzee, Sister Carmela, Randolph, Mass.
Abernathy, Nelson M., Glen Alpine, N.C.
Abernethy, Sarah H., Colton, Calif.
Abrahamson, Mrs. Sharon, Austin, Tex.
Abramson, Mrs. Queade, Abbotsford, B.C., Canada
Abshure, June M., Portland, Oreg.
Acheson, Mrs. Jean, Lafayette, Ind.
Achtzehn, James C., Jr., Syracuse, N.Y.
Aciro, Mrs. Milagros T., Frederick, Md.
Ackerman, Rudolph A., San Bernardino, Calif.
Acuna, Mrs. Darlene, Tucson, Ariz.
Adams, David, Jacksonville, Ill.
Adams, Ellery J., Torrance, Calif.
Adams, Francis W., Greeley, Colo.
Adams, Lonnie L., Agana, Guam
Adams, Mrs. Lucille, Danville, Ky.
Adams, Mrs. Margaret, San Antonio, Tex.
Adams, Paul R., St. Augustine, Fla.
Adamson, Bevedly, Birmingham, Ala.
Adcock, Hal E., Little Rock, Ark.
Adcock, Mrs. Mary Nell, Little Rock, Ark.
Adepoju, Gabriel A., Washington, D.C.
Adkins, Mrs. Barbara K., Indianapolis, Ind.
Adkins, Trisha, El Paso, Tex.
Adler, Gerald, Washington, D.C.
Adler, Mrs. Janelle K., Columbus, Ohio
Adler, Mrs. Judith, Sioux Falls, S.Dak.
Affleck, Marie A. E., Yardley, Pa.
Agines, Joan, Scarsdale, N.Y.
Aguilar, Mrs. Toni, Austin, Tex.
Ai, Mrs. Josephine, Hastings-on-Hudson, N.Y.
Ainbender, Hilary, Portland, Maine
Ainsworth, Phyllis, Yarmouth, Maine
Akin, E. Conley, Knoxville, Tenn.
Akin, Mrs. Lucy L., Knoxville, Tenn.
Akins, Mrs. Juanita W., Raleigh, N.C.
Akiyosha, Norika, Washington, D.C.
Alber, Melda, Council Bluffs, Iowa
Albert, Mrs. Dorothy M., Scranton, Pa.
Albitz, Jon P., Pittsburgh, Pa.
Albright, Judith, Pittsburgh, Pa.
Alby, James F., West Allis, Wis.
Aldrich, Kenneth, Columbus, Ohio
Aldridge, Mrs. Ann H., Morganton, N.C.
Aldridge, Mrs. Lita, Newark, Del.
Alexander, Mrs. Alma Lester, Tucson, Ariz.
Alexander, Mrs. Doris J., Franklin, Ind.
Alexander, Mrs. Frances, Fulton, Mo.
Alexander, Mrs. Mildred, Baker, La.
Alexander, Robert, Fulton, Mo.
Alford, Mrs. Marydel S., St. Augustine, Fla.
Alfred, Mrs. Doris R., Baton Rouge, La.
Algotson, Nancy, So. Pasadena, Calif.
Allard, J. Brad, Fulton, Mo.
Allen, Dale A., Indianapolis, Ind.
Allen, Norman K., Colorado Springs, Colo.
Allen, Mrs. Sally F., West Hartford, Conn.
Allen, Stephen W., West Hartford, Conn.
Allen, Teri M., Dallas, Tex.
Almasy, Mrs. Jane E., Pittsburgh, Pa.
Almer, Mrs. Patrica, Vancouver, Wash.
Alper, Glenna, Elkins Park, Pa.
Alpiner, Dr. Jerome, Littleton, Colo.
Alsobrook, James V., St. Augustine, Fla.
Alter, Ronald L., Bloomfield, N.J.
Alter, Winona B., Indianapolis, Ind.
Altman, Mrs. Ellen, Rochester, N.Y.
Alvarez, Adoracion A., Devils Lake, N. Dak.
Alvarez, Hermenegilda A., Salem, Oreg.
Amann, Frank, Rome, N.Y.
Ambro, Mary Corita, Cleveland, Ohio
Ambrose, Dr. William R., Athens, Ga.
Ames, Ruby J., El Cerrito, Calif.
Anast, Mrs. Mary P., Pittsburgh, Pa.
Andersen, Lloyd, Glen Cove, N.Y.
Andersen, Mrs. Sandra, Sioux Falls, S. Dak.
Anderson, Mrs. Dorthy M., Los Angeles, Calif.

Anderson, Mrs. Diane, Detroit, Mich.
Anderson, Mrs. Elouise H., Baton Rouge, La.
Anderson, Eugene S., Tacoma, Wash.
Anderson, James J., Morganton, N.C.
Anderson, Janet, Jacksonville, Ill.
Anderson, Kathleen Lynn, Arlington, Tex.
Anderson, Mrs. Mamie M., Shaker Heights, Ohio
Anderson, Margaret F., Groton, Conn.
Anderson, Mary L., Glendale, Calif.
Anderson, Marzene E., Philadelphia, Pa.
Anderson, Nancy E., Mansfield, Ohio
Anderson, Peter E., Salem, Oreg.
Anderson, Robert, Jacksonville, Ill.
Anderson, Mrs. Susan S., Decatur, Ga.
Anderson, Thomas B., Oxford, Ohio
Andersson, Yerker, Washington, D.C.
Andrew, William, Huntington Beach, Calif.
Andrews, Alice E., Frederick, Md.
Andruss, Mrs. Constance, Norman, Okla.
Anello, Francine R., Utica, N.Y.
Angel, Mrs. Bettye J., Cave Spring, Ga.
Angel, Lynn I., Kansas City Mo.
Angel, Roberta, New York, N.Y.
Annala, Linda, Jacksonville, Ill.
Anselmo, Tom A., Colorado Springs, Colo.
Anstey, Mrs. Francine E., Pittsburgh, Pa.
Anthony, David A., Anaheim, Calif.
Anton, Mrs. Jeannette, Jacksonville, Ill.
Apodoca, Patricia, Las Vegas, Nev.
Aragon, Louis G., Indianapolis, Ind.
Arbuthnot, Helen, Oakland, Calif.
Archer, Mrs. Anne B., Baltimore, Md.
Arellano, Mrs. Angelina, Santa Fe, N. Mex.
Arensmeier, Mrs. Wilma, Salem, Oreg.
Argentos, Chris, Oakland, Calif.
Arkeylan, Mrs. Kathleen, Knoxville, Tenn.
Armstrong, Carol, Staunton, Va.
Armstrong, Mrs. Julia W., Morganton, N.C.
Arndt, Diane, Normal, Ill.
Arney, Mrs. Carolyn S., Morganton, N.C.
Arnold, Mrs. Floris, Downey, Calif.
Arnold, Geraldine E., Romney, W. Va.
Arnold, Mrs. Phyllis, San Antonio, Tex.
Arnold, Mrs. Rhea V., Romney, W. Va.
Arrington, Mrs. Rebecca, Tucson, Ariz.
Asbell, Mrs. Abby, White Plains, N.Y.
Aschkenas, Judith, New York N.Y.
Aseltine, Mrs. Lorroine, Lombard, Ill.
Ashcraft, Leara M., Lakewood, Calif.
Ashford, Gary G., Los Serranos, Calif.
Askew, Mrs. Martha D., Hampton, Va.
Asklar, Francis J., Torrington, Conn.
Aspengren, Mrs. Frances, Los Angeles, Calif.
Astrello, Veronica, Buffalo, N.Y.
Atchley, Teena, Whittier, Calif.
Atherton, Mrs. Louise T. Spartanburg, S.C.
Athy, Mrs. Hazel, Little Rock, Ark.
Atkinson, Mrs. Catherine, Baton Rouge, La.
Attanasio, Dr. Frederick G., Hyde Park, N.Y.
Attletweed, Mrs. Bernadette, Oakland, Calif.
Attletweed, George, Oakland, Calif.
Aubry, Donald L., Jacksonville, Ill.
Auerbach, Hortense, Hyattsville, Md.
Auerbach, Leon, Hyattsville, Md.
August, Mrs. Mattie, Austin, Tex.
Austell, Mrs. Frances G., Spartanburg, S.C.
Austin, Betty Portis, Jackson, Miss.
Avery, Charlotte B., Pittsburgh, Pa.
Avery, Joseph C., Rochester, N.Y.
Avery, Mrs. Mildred, Jermyn, Pa.
Ayala, Mrs. Linda, Vancouver, Wash.
Ayala, Ray, Vancouver, Wash.
Aycock, Mrs. Annie W., Rome, Ga.
Ayers, Doyle W., Spartanburg, S.C.
Ayers, Mrs. Susie, Olathe, Kans.
Ayers, Mrs. Sybil M., Spartanburg, S.C.

B

Babbini, Mrs. Barbara, Urbana, Ill.
Babocsi, Mrs. Patricia, Webster, N.Y.
Bacon, Janny H., Newport Beach, Calif.
Badamy, Joseph R., Rochester, N.Y.
Bader, Janice, Sausalito, Calif.
Badgett, Mrs. Norma J., Tucker, Ga.
Bailes, Carole, Frederick, Md.
Bailey, Rev. Clark R., Oakland, Calif.
Bailey, David, Knoxville, Tenn.
Bailey, JoAnn M., Eugene, Oreg.
Bailey, Susan, L., Pittsburgh, Pa.
Bailey, Mrs. Janie M., Newark, N.J.
Baird, Terry J., Rockville, Md.
Baker, Arthur A., Superior, Wis.
Baker, Bernice S., Houston, Tex.
Baker, Mrs. Celeste S., Pomona, Calif.
Baker, Dorothee, Washington, D.C.
Baker, Francis, Baton Rouge, La.
Baker, Mrs. Margaret, Austin, Tex.
Baker, Mrs. Mary Virginia, Fulton, Mo.
Baker, Robert W., Naperville, Ill.
Baker, Thomas James III, Washington, D.C.
Balas, Robert F., Alexandria, Va.
Balasa, Mrs. Mary, Danville, Ky.
Balcom, Mrs. Dorothy A., Seattle, Wash.
Baldis, Mrs. Bette J., Miramonte, Calif.
Baldridge, Kathryn, Carmel, Ind.
Baldridge, Paul F., Carmel, Ind.

Baldwin, Mrs. Blanche, Rochester, N.Y.
Baldwin, Mrs. Patricia A., Sulphur, Okla.
Baldwin, Richard L., Prairie Village, Kans.
Balfour, Louis M., Chevy Chase, Md.
Ball, Catherin, Dumont, N.J.
Ballard, Mrs. Carolyn F., Roswell, N. Mex.
Baltzer, Susanna, Suitland, Md.
Bamerick, Susan J., Corona del Mar, Calif.
Banks, Geraldine W., Baton Rouge, La.
Banks, Mrs. Mattie D., East Orange, N.J.
Banta, Mrs. Harriett, St. Augustine, Fla.
Baran, Loretta R., Erie, Pa.
Barba, Mrs. Sincera T., Philadelphia, Pa.
Barbee, Margaret, Minneapolis, Minn.
Barber, E. Carl, Riverside, Calif.
Barber, Mrs. E. Page, San Francisco, Calif.
Barham, Jane, St. Augustine, Fla.
Baril, Mrs. Beverly Y., Richardson, Tex.
Barison, Andrea, Fort Lee, N.J.
Barkell, Mrs. Mildred, Santa Fe, N. Mex.
Barker, Jay, Colorado Springs, Colo.
Barker, Mary Louise, Santa Fe, N. Mex.
Barkes, Alice, Albany, Calif.
Barksdale, Mrs. Hatty G., Spartanburg, S.C.
Barkuloo, Dr. Herbert W., Bellevue, Wash.
Barlow, Pauline, Austin, Tex.
Barner, John C., Schnectady, N.Y.
Barnes, Mrs. Connie B., Talladega, Ala.
Barnes, Mrs. Genevieve H. Pittsburgh, Pa.
Barnes, George E., Rochester, N.Y.
Barnes, Dr. O. Dennis, Rochester, N.Y.
Barnes, Mrs. Joyce H., Indianapolis, Ind.
Barnes, Mrs. Marjorie, Fulton, Mo.
Barnes, Mrs. Nelda K., Spartanburg, S.C.
Barnes, Ralph, Spartanburg, S.C.
Barnes, Ronald, Los Angeles, Calif.
Barnett, David, Indianapolis, Ind.
Barnett, Mrs. Mary, Baton Rouge, La.
Barnett, Mary Ann, Hannibal, Mo.
Barnett, Mrs. Sally, Indianapolis, Ind.
Barr, Mrs. Barbara W., Frederick, Md.
Barr, David P., Boxford, Mass.
Barr, Marilyn, San Mateo, Calif.
Barr, Paul E., Frederick, Md.
Barr, Paul E., Jr., Frederick, Md.
Barrett, Anna Marie, Buffalo, N.Y.
Barrett, Sharon Sue, Las Vegas, Nev.
Barron, Mrs. Lena, Baton Rouge, La.
Barron, Mrs. Richard, Rocky River, Ohio
Barron, Roy, Council Bluffs, Iowa
Barrows, Mrs. Orpha, Colorado Springs, Colo.
Barry, Sister Virginia, Lake Ronkonkoma, N.Y.
Bartlett, Mrs. Linda T., Dallas, Tex.
Barts, Lettie, Omaha, Nebr.
Basnett, Mrs. Lanola, Fulton, Mo.
Bass, Mrs. Barbara, Great Falls, Mont.
Bass, Mrs. Berenice P., Miami, Fla.
Barwick, Dorothea, Providence, R.I.
Batchelder, Mrs. Patricia, M., Riverside, Calif.
Bates, Mrs. Joanne, Council Bluffs, Iowa
Batshaw, Mrs. Marilyn, Woodbridge, N.J.
Battin, Mrs. Dorothy B., Pennington, N.J.
Battle, Mrs. Edna C., Knoxville, Tenn.
Battle, Mrs. Kenneth B., Raleigh, N.C.
Battle, Raymond N., Knoxville, Tenn.
Baudoin, Thelma, Baton Rouge, La.
Baughman, Robert T., Stanford, Ky.
Bauman, Glenn O., Gooding, Idaho
Baumstark, Barbara, Ft. Meade, Md.
Bayless, Elizabeth A., Balboa Island, Calif.
Beach, Mrs. Charlotte, San Francisco, Calif.
Beach, J. Edward, Morganton, N.C.
Beach, Mrs. Gail G., Morganton, N.C.
Beachum, Mrs. Gayle M., San Antonio, Tex.
Beaird, Mrs. Catherine, Cave Spring, Ga.
Beal, Mrs. Cynthia C., Pittsburgh, Pa.
Beal, Mrs. Marjory B., Arvada, Colo.
Beale, Jane C., Silver Spring, Md.
Beale, Mrs. Jean W., Las Vegas, Nev.
Beam, Norman, Talladega, Ala.
Beasley, Edward E. Bethesda, Md.
Beatty, Mrs. Mary H., Spartanburg, S.C.
Beaver, Larry B., Olathe, Kans.
Beaver, Mrs. Stephany, Olathe, Kans.
Beck, Mrs. Janet E., Orlando, Fla.
Beck, Joan, El Dorado, Ark.
Beck, Mrs. Marilyn, Fulton, Mo.
Beck, Ruth, Bayside Hills, N.Y.
Becker, Betsy, Evanston, Ill.
Becker, Bruce, Omaha, Nebr.
Becker, Glenda, Jacksonville, Ill.
Becker, Mrs. Sonjia G., Dallas, Tex.
Bedford, Celinda, Devils Lake, N. Dak.
Beem, Mrs. Margaret S., St. Augustine, Fla.
Beers, Carlton, Council Bluffs, Iowa
Behre, Sister Ann, Brooklyn, N.Y.
Behrends, Dr. Stanley G., Garden Grove, Calif.
Behrens, Dr. Thomas R., Arlington, Va.

Belcher, Mrs. Carol, Boynton Beach, Fla.
Belcher, Milton Don, Colorado Springs, Colo.
Belding, Anita, Sunnymead, Calif.
Belding, Don, Riverside, Calif.
Bell, Mrs. Bobbie J., Riverside Calif.
Bell, Robert C., West Hill, Ontario, Canada
Bell, Sheryle, Stevens Point, Wis.
Bellefleur, Dr. Philip A., Philadelphia, Pa.
Bellhorn, Walter J., Detroit, Mich.
Bellman, Patty, Evanston, Ill.
Belser, George, Vancouver, Wash.
Benedetto, Joseph, Metairie, La.
Benfield, Mrs. Louise H., Glen Alpine, N.C.
Benett, Mrs. A. Jean, Santa Susana, Calif.
Bennett, Elizabeth, Shawnee Mission, Kans.
Bennett, Mrs. Elizabeth Ann, Santa Fe, N. Mex.
Benowitz, Mrs. Marceille, Rochester, N.Y.
Benowitz, Stanley, Rochester, N.Y.
Benshoof, Margaret, Seattle, Wash.
Benson, Dr. Elizabeth, Frederick, Md.
Benson, Mrs. Marcia N., West Orange, N.J.
Benson, Mary Alice, Frederick, Md.
Bently, Mrs. Tommie, Lubbock, Tex.
Benton, Mrs. Marissa, Pensacola, Fla.
Benton, Nancy, Sioux Falls, S. Dak.
Benton, Norma L., Cave Spring, Ga.
Beranek, Junior B., Jacksonville, Ill.
Berg, David R., Tonawanda, N.Y.
Berg, Thomas O., College Park, Md.
Bergan, Robert L., Silver Spring, Md.
Berger, Shirley L., Parsons, Kans.
Berges, Shirley A., Cleveland, Ohio
Bergin, Rev. Robert D., West Hartford, Conn.
Bergl, Mrs. Burkett K., Morganton, N.C.
Bergman, Stephanie R., Philadelphia, Pa.
Bergquist, Mrs. Anna T., Colorado Springs, Colo.
Bergstresser, R. Henry, Arlington, Va.
Bergstresser, Phyllis, Webster, N.Y.
Bergstrom, Dagny D., Williams Bay, Wis.
Berhow, Byron, Vancouver, Wash.
Berhow, Mrs. Martha, Vancouver, Wash.
Berlow, Dr. Susan, Chicago, Ill.
Bernknopf, Ava, Philadelphia, Pa.
Bernover, Rosanne, Champaign, Ill.
Bernsen, Mrs. Eliane, Fullerton, Calif.
Bernstein, H. William, Holliswood, N.Y.
Bernstein, Seymour S., Riverside, Calif.
Bernstein, Vivian D. Brooklyn, N.Y.
Bernstone, Mrs. Alyce, Brooklyn, N.Y.
Berry, Mrs. Betsy L., Riverside, Calif.
Berry, Herbert M., Canaserage, N.Y.
Berry, Mrs. Judy, Hildebran, N.C.
Berry, Mrs. Sharon, Norfolk, Va.
Berry, Thelma, Rochester, N.Y.
Bess, John, Little Rock, Ark.
Best, Barbara, Fresno, Calif.
Best, Diane, Overland Park, Kans.
Bester, Mrs. Ruby S., Cincinnati, Ohio
Bettinger, Mrs. Cornelia, Webster, N.Y.
Bevan, Richard C., Newtown, Pa.
Beyer, Frances M., Santa Ana, Calif.
Biddle, Karen, Finleyville, Pa.
Biggerstaff, Mrs. Shirley, Olathe, Kans.
Bigham, Mrs. Meta H., Morganton, N.C.
Bilbow, Patrice, Pittston, Pa.
Bilger, Charles M., Olathe, Kans.
Bilger, Mrs. Grace, Olathe, Kans.
Billings, Mrs. Ella W. H., Morgonton, N.C.
Billone, Carol Jean, N. Hollywood, Calif.
Bingeman, Mrs. Colleen, St. Augustine, Fla.
Bingen, Helen, Chicago, Ill.
Birch, Mrs. Jane R., Pittsburgh, Pa.
Birch, Lowell B., Amherst, Nova Scotia, Canada
Bird, Mrs. Eleanor L., Knoxville, Tenn.
Bird, Mrs. Martha M., Gooding, Idaho
Bird, Paul C., Gooding, Idaho
Birdsell, Ben A., West Hartford, Conn.
Birdsell, Mrs. Della, Jacksonville, Ill.
Bishop, Mrs. Alnora, San Diego, Calif.
Bishop, Mrs. Suzanne E., Tempe, Ariz.
Bissell, Mrs. Joan, Battle Ground, Wash.
Bitter, Dr. Grant B., Salt Lake City, Utah
Bjorlie, Henry O., Rome, N.Y.
Black, Clifford R., McKeesport, Pa.
Black, Darlene K., New Hope, Minn.
Black, Mrs. Frances, Little Rock, Ark.
Black, Mrs. Gail M., Lombard, Ill.
Black, Joanne, Ypsilanti, Mich.
Black, Mildred, Spartanburg, S.C.
Black, Nancy, Ypsilanti, Mich.
Blackburn, Mrs. Earline, Austin, Tex.
Blackburn, Mrs. Nancy, Staunton, Va.
Blackburn, William, Austin, Tex.
Blackmer, Gary, Delavan, Wis.
Blackwell, Jesse C., Carmel, Ind.
Blair, Mary A., Lansing, Mich.
Blake, Gary D., Fayetteville, Ark.
Blake, Florence, Bronx, N.Y.
Blakemore, Mrs. Janice, Brick Town, N.J.
Blakesley, Mrs. Lillian A., Dallas, Tex.
Blatti, Christine, E. Hartford, Conn.
Blattner, Mrs. Evangeline, Fulton, Mo.
Bledso, Mrs. Neal, Tucson, Ariz.
Bleifuss, Mrs. Mary Ellen, Fulton, Mo.
Blesse, Mrs. Rosemary, Jacksonville, Ill.
Blessing, Regina, Riverside, Calif.

Blethen, Mrs. Laura, Richmond, Calif.
Blevins, William G., Northampton, Mass.
Blomberg, Mrs. Doris M., Moline, Ill.
Blonstein, Mark M., St. Augustine, Fla.
Blow, Mrs. Marion, Rochester, N.Y.
Blue, Mrs. Burnell, N. Little Rock, Ark.
Blum, Carolyn, Los Angeles, Calif.
Blum, Mrs. Ellen, Rochester, N.Y.
Blum, Mrs. Mary B., Spartanburg, S.C.
Boatner, Dr. E. B., Hartford, Conn.
Bode, Mrs. Bernice E., Orange, Calif.
Bodner, Barbara Ann, Jamesville, N.Y.
Boehm, Susan M., Wilson, N.C.
Boemke. Sharon, Brooklyn, N.Y.
Boese, Delia, Milwaukee, Wis.
Boesen, Kelly W., Northridge, Calif.
Bogan, Kathleen, Buffalo, ·N.Y.
Boldizar, Gloria A., Pittsburgh, Pa.
Bolen, Mrs. Sandrasue, Riverside, Calif.
Boles, Mrs. Virginia, Baton Rouge, La.
Bolesta, Mrs. Ethel M., Tampa, Fla.
Boley, Louis M., Rommey W, Va.
Boley, Mrs. Marjorie L.. Romney, W. Va.
Bolognone, John, Columbus, Ohio
Bolton, J. David, Leesburg, Va.
Boltz, Robert, Metarie, La.
Bonacorso, Mrs. Alison, Baton Rouge, La.
Bonadio, Mrs. Diana, Wilkes-Bare, Pa.
Bonar, Mrs. Patricia A., Burlington, W. Va.
Bond, Albert, Reseda, Calif.
Bonds, James D., Jacksonville, Ill.
Bonito, Antonio, St. Augustine, Fla.
Bonnickson, Mrs. Kathie A., Tucson, Ariz.
Bontrager, Robert, Salem, Oreg.
Booker, Linda, Knoxville, Tenn.
Booser, Donald, Palmyra, Pa.
Borden, Mrs. Sue, Shoshone, Idaho
Bordman, Marcia B., Washington, D.C.
Bores, Mrs. Frances, Euclid, Ohio.
Borgert, Mrs. Marguerite A., Edmonds, Wash.
Born, Edward D., Gooding, Idaho
Borntrager, Karen, Great Falls, Mont.
Boros, Mary N., Wilmar, Minn.
Borron, Mrs. Roberta, Austin, Tex.
Bosch, Mrs. Audrey, Fulton, Mo.
Bosler, Ronald J., Columbia, Mo.
Boston, Mrs. Inez H., Baton Rouge, La.
Bosworth, Mrs. Margaret, Pasadena, Md.
Bothwell, Hazel, Springfield, Ill.
Bottini, Elizabeth, Rome, N.Y.
Bottlinger, Wayne C., South Burnaby, B.C., Canada
Bouchard, Mrs. Evadna, Pittsford, N.Y.
Boucher, J. Philip, Peterboro, N.H.
Boucher, Robert R., Geneseo, N.Y.
Bounds, Mrs. Laura F., Tuscaloosa, Ala.
Bourget, Alfred C., Manchester, N.H.
Bourret, Mrs. Tarrell, Stanford, Ill.
Bouvet, Mrs. Leticia, Santa Fe, N. Mex.
Bowe, Frank, Espy, Pa.
Bowen, Mrs. Carol, Berkeley, Calif.
Bowers, Earlene, Glen Alpine, N.C.
Bowers, Joy C., Morganton, N.C.
Bowers, Mrs. Kay S., Birmingham, Ala.
Bowie, Mrs. Bobbie J., Monroe, La.
Bown, Mrs. Sue, Austin, Tex.
Boyce, C.L. Omaha, Nebr.
Boyd, Barbara E., Indianapolis, Ind.
Boyd, Jane, Corona del Mar, Calif.
Boyd, Dr. John, Belleville, Ontario, Canada
Boyer, Mrs. Nyda C., Riverside, Calif.
Boyette, Mrs. Mamie, Wilson, N.C.
Bozarth, Peggy, Cornwells Heights. Pa.
Bozzi, Diane L., Houghton Lake, Mich.
Brace, Lilian J. D., Worcs. Wr. 141, NE, England
Bradford, Mrs. Erelene L., Baton Rouge, La.
Bradford, Mrs. Jessie, Austin, Tex.
Bradford, Mrs. Rosalind, Santa Fe, N. Mex.
Bradford, W. L., Baton Rouge, La.
Bradley, Clifford R., Enid, Okla.
Bradley, Eloise, Moraga, Calif.
Bradley, Helen, Hudson Falls, N.Y.
Bradley, Maryellen, Brooklyn, N.Y.
Bradley, Mrs. Ruth C., Jacksonville, Ill.
Bradley, Mrs. Sandra, Piedmont, Calif.
Bradshaw, Daniel G., Florissant, Mo.
Bradshaw, Mrs. Jan, Danville, Ky.
Bradshaw, John, Danville, Ky.
Bradshaw, Mrs. Norma B., Riverside, Calif.
Brady, Mrs. Dorothy, Danville, Ky.
Brady, Jack W., Danville, Ky.
Brady, Mrs. Patricia A., Chappaqua, ·N.Y.
Brady, Mrs. Robbye, Long Beach, Calif.
Brady, Mrs. Roberta, Springfield, N.J.
Bragner, Mrs. Josephine E., Topsfield, Mass.
Bragner, William E., Beverly, Mass.
Branch, Mrs. Hattie L., Hampton, Va.
Brandy, Mrs. Ellen, Del Mar, Calif.
Braniger, J. Harley W., Monmouth, Oreg.
Brannan, A. Clark, Abilene, Tex.
Branson, Virginia M., New Haven, Conn.
Brantley, Nancy, Smithfield, N.C.
Brasel, Kenneth, Urbana, Ill.
Brasel, Melvin H., Faribault, Minn.
Bratt, Mrs. Dorothy, Bethesda, Md.
Braucht, Patricia L., Philadelphia, Pa.
Braun, Mrs. Elizabeth C., Pittsburgh, Pa.
Braunstein, Mrs. Stephen, Waco, Tex.
Bray, Mrs. Elvira C., Cave Spring, Ga.
Breitwieser, Joseph V., Napa, Calif.

Brelje, H. William, Portland, Oreg.
Brendan, Sister Ann, Brooklyn, N.Y.
Brendle, Mrs. Josephine M., Drexel, N.C.
Brenfleck, Mrs. Cleta, Trenton, N.J.
Brennan, Mrs. Nancy B., Pittsburgh, Pa.
Brenton, Mrs. Carolyn, Glenwood, Iowa
Brettel, Carol Ann, Atlanta, Ga.
Brewer, Mrs. Mary Virginia, Jacksonville, Ill.
Brewer, Robert, San Antonio, Tex.
Brick, Lawrence J., Jacksonville, Ill.
Bridgers, Mrs. Ruth, Morganton, N.C.
Bridges, John S., Hildebran, N.C.
Bridges, Mae, Cowpens, S.C.
Bridges, Mrs. Ruth C., Morganton, N.C.
Bridges, Mrs. Sharon L., Jackson, Miss.
Bridges, Mrs. Susan K., Shawnee Mission, Kans.
Bright, Mrs. Anne O., Romney, W. Va.
Brill, Dr. Richard G., Riverside, Calif.
Bringer, Stanton, Concord, Calif.
Brin, Kenneth, P., New York, N.Y.
Brininstool, Carl, Austin, Tex.
Bristow, Sandra, Santa Fe, N. Mex.
Broadbent, Mrs. Loyce S., Indianapolis, Ind.
Brock, Jon M., Birmingham, Ala.
Brodie, Catherine, Little Rock, Ark.
Brodsky, Carole, Chicago, Ill.
Broecker, Mrs. Betty, New Orleans, La.
Broecker, Clarence, Austin, Tex.
Brooke, Frances E., Las Cruces, N. Mex.
Brooke, Mrs. Gladys, West Hartford, Conn.
Brooks, Mrs. Frances S., Centerville, Pa.
Broome, Edward L., Clinton, Miss.
Brouillette, Ronald, Rochester, N.Y.
Broussard, Herman, St. Augustine, Fla.
Broussard, Mrs. Patricia, St. Augustine, Fla.
Brown, Bernard, P., Springfield, Mass.
Brown, Donald W., Silver Spring, Md.
Brown, Mrs. Ester D., Delavan, Wis.
Brown, Francella E., Washington, D.C.
Brown, George K., Morganton, N.C.
Brown, Harold F., Morganton, N.C.
Brown, Mrs. Joyce, Little Rock, Ark.
Brown, Joyce L., Cleveland Heights, Ohio.
Brown, Mrs. Judith, Roodhouse, Ill.
Brown, Luther, Jackson, Miss.
Brown, Mrs. McKay, Staunton, Va.
Brown, Mrs. Nan, Swope, Va.
Brown, Norman S., Indianapolis, Ind.
Brown, Mrs. Ola M., Indianapolis, Ind.
Brown, Mrs. Pauline, Benton, Ark.
Brown, Robert S., Jackson, Miss.
Brown, Mrs. Ruby C., Cleveland, Ohio
Brown, Ruth Fletcher, Santa Fe, N. Mex.
Brown, Mrs. Virginia, Detroit, Mich.
Browne, Herschel, R., Roebuck, S.C.
Browning, Mrs. Ruth D., Louisville, Ky.
Broyles, Mrs. Jerri, Little Rock, Ark.
Brubaker, Karen F., Frederick, Md.
Brueggeman, Dorothy, Olathe, Kans.
Brundidge, Kenneth, Council Bluffs, Iowa
Bruning, Mrs. Deborah J., West Trenton, N.J.
Brunjes, Adele, Oyster Bay, N.Y.
Brunk, Margaret E., Philadelphia, Pa.
Bruno, Mary Ellen, Pittsburgh, Pa.
Bruno, Mrs. Phyllis, Normal, Ill.
Bruns, Karen M., Austin, Tex.
Bruns, Margaret E., Berkeley, Calif.
Bruster, Mrs. Alice F., Roff, Okla.
Bruton, Katherine M., Overland Park, Kans.
Bryan, Don J., Indianapolis, Ind.
Bryan, Frank R., Cheverly, Md.
Bryan, Judith A., Tucon, Ariz.
Bryan, Jerry E., Grand Forks, N.C.
Bryan, Mrs. Kathleen T., Buffalo, N.Y.
Bryant, Frank W., Cave Spring, Ga.
Bryant, Mrs. Goldie S., Spartanburg, S.C.
Bryant, Vigreginer, Atlanta, Ga.
Bubar, Nancy, Los Angeles, Calif.
Buchanan, Mrs. Alice, San Jose, Calif.
Buchmann, Adella V., Olathe, Kans.
Buck, Frank, Lafayette, Calif.
Buehler, Mrs. Margaret, Plantsville, Conn.
Bugden, Sister M. Bridgit, San Antonio, Tex.
Bulba. Mrs. Lorraine, Bloomfield, Conn.
Bull, Rev. Thomas H., Alexandria, Va.
Bullock, Donald, Concord, Calif.
Bunge, Mrs. Mary K., Ontaria, Calif.
Bunker, Charles, Buffalo, N.Y.
Bunn, Mrs. Ruby V., Wilson, N.C.
Burch, Daniel David, Kalamazoo, Mich.
Bunco, Mrs. Mary Ellen, Vancouver, Wash.
Burdett, Kenneth, Ogden, Utah
Burdette, Priscilla, Ogden, Utah
Burger, Fr. Richard, Edgerton, Kans.
Burgheimer, Martha, Overland Park, Kans.
Burke, Mrs. Beatrice, Pittsford, N.Y.
Burke, Harry C., Flint, Mich.
Burke, Sister Mary Eleanor, Randolph, Mass.
Burke, Rosemary M., Pittsburgh, Pa.
Burkhart, Mrs. Anne, Austin, Tex.
Burks, Mrs. Sandra, Austin, Tex.
Burley, Marvin M., Wilson, N.C.
Burley, Mrs. Sallie Ann, Wilson, N.C.
Burlingame, Sharon Smith, Ann Arbor, Mich.
Burnet, Eugenia, Indianapolis, Ind.
Burnett, Barbara, Riverside, Calif.
Burnett, Mrs. Ruth E., Houston, Tex.

Burns Mrs. Catherine, Little Rock, Ark.
Burns. Mrs. Cynthia C., Sacramento, Calif.
Burns, Mrs. Frances, Chicago, Ill.
Burns, Mrs. Gladyce E., Devils Lake, N.C.
Burns, Mrs. Mary Ann, Grandview, Mo.
Burrell, Mrs. Jeannette, Tucson, Ariz.
Burrows, Nona, Pittsburgh, Pa.
Burstein, Gerald, Riverside, Calif.
Burstein, Theresa C., Riverside, Calif.
Busby, Mrs. Caroline M., Olathe, Kans.
Busby, Howard R., Olathe, Kans.
Busby, Rev. Walter, St. Augustine, Fla.
Busenbark, Mrs. Madlyn, Omaha, Nebr.
Bushey, Norma M., Morganton, N.C.
Butkus, Mrs. Marie M., Morganton, N.C.
Butler, Mrs. Eleanor, La Habra, Calif.
Butler, Mrs. Gloria, Roebuck, S.C.
Butler, Gwendel, Austin, Tex.
Butler, John W., Liverpool, N.Y.
Butler, Mrs. Marguerite, St. Augustine, Fla.
Butler, Raymond, St. Augustine, Fla.
Butterweck, Thomas C., Jacksonville, Ill.
Buttrill, Mrs. Jane, Annapolis, Md.
Butts, Frank M., Charlottesville, Va.
Buzanowski, Father Donald J., Green Bay, Wis.
Buzzard, Henry J., Peekskill, N.Y.
Byers, Gerald, Corona, Calif.
Byers, Lois, Evanston, Ill.
Bynum Donald F., Charlotte, N.C.
Byrd, Herbert J., Maryville, Tenn.
Byron, Mrs. Minnie, Columbus, Ohio

C

Cabbage, Mrs. Nelly P. K., Gooding, Idaho
Caccamise, Frank Jr., Arcata, Calif.
Cade, Mrs. Judith S., Las Vegas, Nev.
Caffee, Mrs. Elnora L., Hampton, Va.
Cagney, Elizabeth, El Monte, Calif.
Caldwell, Doris C., Knoxville, Tenn.
Caldwell, Elizabeth H., Seattle, Wash.
Caldwell, Golda, Austin, Tex.
Calhoon James R., Athens, Ga.
Callagy, Shannon, No. Miami Beach, Fla.
Callahan, Mrs. Catherine G., Glen Mills, Pa.
Callahan, Sister Helen, Randolph, Mass.
Callahan, Judy Lee, Seattle, Wash.
Callaway, Mrs. Betty Jean, Spartanburg, S.C.
Calvert, Mrs. Rae, Berkeley, Calif.
Cameron, Cari L., Conshohocken, Pa.
Cameron, Mrs. Dorothy S., Columbus, Ohio
Cameron, Mrs. Lynn S., East Hartford, Conn.
Cammeron, Julie Jane, Washington, D.C.
Camoia, Mrs. Rosemary, Brooklyn, N.Y.
Campaign, Mrs. Jacqueline M., Littleton, Mass.
Campbell, Mrs. Anne Mary, Big Spring, Tex.
Campbell, Don R., Inglewood, Calif.
Campbell, Mrs. Karen S., Indianapolis, Ind.
Campbell, Mrs. Katherine, Pennington, N.J.
Campbell, Mrs. Margaret, Indianapolis, Ind.
Campbell, Mrs. Mary, Berkeley, Calif.
Campbell, W. D. Jr., Morganton, N.C.
Canada, Lillian, Ft. Lauderdale, Fla.
Cancro, George P., Tarrytown, N.Y.
Cannon, Mrs. Sally, Palo Alto, Calif.
Cantwell, Paul R., Chicago, Ill.
Canty, Mrs. Linda, Hartsdale, N.Y.
Caple, John L., Cave Spring, Ga.
Cappel, Guy M., Salem, Oreg.
Capps, Elizabeth, Jacksonville, Ill.
Capps, Rosemary, Berkeley, Calif.
Capsuto Herman M., Tucson, Ariz.
Carballo, Mrs. Anne, Newark, N.J.
Carben, Evelyn M., Butler, Pa.
Cardinal, Alane, Rochester, N.Y.
Carl, Sister Mary, Randolph, Mass.
Carla, Sister Mary, Randolph, Mass.
Carleton, Mrs. Frederick, Bay Village, Ohio
Carlsen, Mrs. Joanne M., Casper, Wyo.
Carlson, Mrs. Bettie, Sioux Falls, S. Dak.
Carlson, David N., Sioux Falls, S. Dak.
Carlson, Mrs. June M., Clinton, Wis.
Carlson, Mrs. Kay, Sioux Falls, S. Dak.
Carlson, Thomas L., Faribault, Minn.
Carlstrand, Glenn, Tucson, Ariz.
Carlston, J. Raymond, Staunton, Va.
Carmichael, Minnie, Knoxville, Tenn.
Carney, Barbara, Washington, D.C.
Carpenter, Douglas, Ogden, Utah.
Carr, Agnes H., Jacksonville, Ill.
Carr, Albert G., Kansas City, Kans.
Carr, Josephine, Monmouth, Oreg.
Carr, June, Milwaukee, Wis.
Carr, Mrs. Margaret, Knoxville Tenn.
Carricut, Miss Carol, La Center, Wash.
Carrigan, Warren, Panorama City, Calif.
Carrithers, Winifred, Omaha, Nebr.
Carroll, Mrs. Barbara A., Baldwin, N.Y.
Carroll, Karen M., Richmond, Va.
Carroll, Mrs. Mildred, Taylor, Pa.
Carroll, Sister Patricia, Brooklyn, N.Y.
Carskadon, Mrs. Karen, LaCrosse, Wis.
Carson, Mary E., Jacksonville, Ill.
Carson, Roy, Fulton, Mo.
Carstens, Rev. David, Knoxville, Tenn.
Carter, Mrs. Betty J., Midway, Tex.
Carter, Mrs. Carlota, St. Augustine, Fla.

Carter, Leah B., San Diego, Calif.
Carter, Mark, Delavan, Wisc.
Carter, Melvin Jr., Faribault, Minn.
Carter, Paul J., Lindale, Ga.
Carter, Mrs. Sharon H., Faribault, Minn.
Caruso, Mary D., Pittsburgh, Pa.
Carver, Patricia A., Fresno, Calif.
Casel, Caren, Margate, N.J.
Casey, Mrs. Dondra, Cave Spring, Ga.
Casey, Katharine, Cave Spring, Ga.
Casillo, Mrs. Mary L., Pittsburgh, Pa.
Cass, Mrs. Edward, Bay Village, Ohio
Cassetti, Edmond, Rocky Hill, Conn.
Castenada, Carol E., Seattle, Wash.
Caster, Audrey, Trenton, N.J.
Castle, Mrs. Elizabeth, Faribault, Minn.
Castle, Dr. William E., Penfield, N.Y.
Catalano, Eugene W., Portland, Maine.
Catto, Mrs. Ruth N., Pauline, S.C.
Cauley, Eileen, Little Rock, Ark.
Causby, Judy A., Morganton, N.C.
Cecil, Sister Mary, Randolph, Mass.
Cenci, Mrs. Mary Beth, Newington, Conn.
Cerio, Mrs. Roberta, Alexandria, Va.
Chadwick, Barbara, Racine, Wis.
Chagnon, Mrs. Lucille F., Vancouver, Wash.
Chaifetz, Dana Sue, Morganton, N.C.
Chambers, Mrs. Catherine, Atlanta, Ga.
Chance, Mrs. Paula, Jacksonville, Ill.
Chann, Henry, Vacaville, Calif.
Chapman, Dona, Monmouth, Oreg.
Chapman, Mrs. Dorothy, Spartanburg, S.C.
Chapman, Mrs. Iva, Mount Berry, Ga.
Chapman, Jesse P. III, Jacksonville, Ill.
Chapman, Mrs. Judy H., Gastonia, N.C.
Chapman, Mrs. Mildred, Baton Rouge, La.
Chappell, Mrs. Gloria, Talladega, Ala.
Charlton, Ella, Pittsburgh, Pa.
Chaston, Bert, Roy, Utah
Charters, Judy, Oak Park, Mich.
Chatman, Beatrice, Washington, D.C.
Chatman, Mrs. Amanda E., Rome, Ga.
Cheney, Sandi, Jacksonville, Ill.
Cheng, Mrs. Kwok-Chi Gertrude, Hyattsville, Md.
Cheraso, Samuel C., Scarboro, Maine
Chernoff, Dr. Marvin, Beverley Hills, Calif.
Chevallier, Ada M., Frederick, Md.
Childs, Mrs. Peggy, Austin, Tex.
Chonkich, Mrs. Sarah, Livonia, Mich.
Chopin, Mrs. Joan, Daly City, Calif.
Christian, Howard, Fulton, Mo.
Christopulos, Tony, Ogden, Utah
Chubb, Mrs. Louise B., Cave Spring, Ga.
Chwalow, Mrs. Esther L., Bala Cynwyd, Pa.
Cichowski, Robert, Birmingham, Mich.
Cindrich, Mary L., Royal Oak, Mich.
Clack, James Leland, Hyattsville, Md.
Clarcq, Dr. Jack R., Victor, N.Y.
Clark, Clarence J. Jr., Los Angeles, Calif.
Clark, Debbie, Washington, D.C.
Clark, Mrs. Dorothea, Fulton, Mo.
Clark, Mrs. Dorothy M., Flint, Mich.
Clark, Mrs. Edwina, Ada, Okla.
Clark, Kenneth E., Olathe, Kans.
Clark, Joyce, Tucson, Ariz.
Clark, Mary, Knoxville, Tenn.
Clark, Mrs. Mary M., Staunton, Va.
Clark, Mrs. Naomi, Talladega, Ala.
Clark, Mrs. Prudy, Rialto, Calif.
Clarke, Gordon W., West Hartford, Conn.
Clarke, Linda, Alexandria, Va.
Clarke, Mrs. Ruth F., West Hartford, Conn.
Clarke, Dr. Thomas C., North Logan, Utah
Clatterbuck, Mrs. Margaret, Salem, Oreg.
Clatterbuck, Dr. Marvin B., Salem, Oreg.
Claytor, Mrs. Harriett, Hampton, Va.
Cleary, Dan, Tucson, Ariz.
Cleary, Florence, Lake Ronkonkoma, N.Y.
Cleary, John, Elmsford, N.Y.
Cleary, Sister Mary, Brooklyn, N.Y.
Cleary, Paul G., East Hartford, Conn.
Clemens, Kenneth, Salem, Oreg.
Clement, Mrs. Honor, Winnipeg 22, Man., Canada
Clement, Susan Lynn, Mabelvale, Ark.
Clements, E. Eugene, Jacksonville, Ill.
Clements, Mrs. Fay M., San Antonio, Tex.
Clements, Mrs. Julianne, Jacksonville, Ill.
Clemmer, Mrs. Irma, Middlebrook, Va.
Clerk, Seleana, Jackson, Miss.
Cleslar, Alicia, Urbana, Ill.
Cleveland, Merton D., Sulphur, Okla.
Clinard, Betty, Washington, D.C.
Cline, Mrs. Brenda K., Hickory, N.C.
Clingenpeel, Robert G., Santa Fe, N.M.
Clonzt, Mrs. Martha C., Gooding, Idaho
Clouse, Thomas L., Manheim, Pa.
Clouser, Richard A., University Park, Pa.
Cobb, Goodwin K. III, Newark, Del.
Cobb, Regina, Knoxville, Tenn.
Coen, Mrs. Karen, Ypsilanti, Mich.
Cohen, Marcy Ellen, Los Angeles, Calif.
Cohen, Miss Robie, Scotch Plains, N.Y.
Cohen, Rose, Yonkers, N.Y.
Cohl, Mrs. Rona S., Carmichael, Calif.
Cohn, Mrs. Joan, Old Mystic, Conn.
Cohrs, Christine, Chicago, Ill.
Colburn, Mrs. Moran O. Talladega, Ala.
Colburn, Moran O., Talladega, Ala.
Coleman, Mrs. Joyce, Knoxville, Tenn.

Coleman, Mrs. Julia S., Spartanburg, S.C.
Coleman, Lynn C., Frederick, Md.
Coleman, Margaret G., Berkeley, Calif.
Coleman, Mrs. Mildred, Spartanburg, S.C.
Coleman, Sara L., Danville, Ky.
Colepaugh, Gertrude, Venice, Fla.
Coll, Mrs. Mary Belle, Olathe, Kan.
Collier, Miss Billie, Overland Park, Kans.
Collins, George, Council Bluffs, Iowa
Collins, Dr. James L., Rochester, N.Y.
Collins, Mrs. Jane, Yardley, Pa.
Collins, Sister Jeanne, Randolph, Mass.
Colo, Ann Marie, West Hartford, Conn.
Comaskey, Al E., Covina, Calif.
Combee, Mrs. Ladre O., Rome, Ga.
Combs, Wilma, Imperial Beach, Calif.
Comin, Constance, Trumansburg, N.Y.
Compton, Betty L., Tucson, Ariz.
Condon, Mrs. Helene, Trenton, N.J.
Conklin, Mrs. Cara M., Faribault, Minn.
Conley, Mrs. Charlotte H., Morganton, N.C.
Conlon, Sara, Tallahassee, Fla.
Connelly, Sister Helen Louise, Pittsburgh, Pa.
Connelly, Mrs. Marilyn, Baton Rouge, La.
Conner, Florence, Tucson, Ariz.
Conner, Janet, Evanston, Ill.
Connolly, Thomas A., Henrietta, N.Y.
Connor, Mrs. Marcella, Omaha, Nebr.
Connors, Sister Phyllis, Buffalo, N.Y.
Consaul, Valerie J., Rochester, N.Y.
Contes, Ellen, Tucson, Ariz.
Conti, Richard A., Valhalla, N.Y.
Conway, Sister Anne, Randolph, Mass.
Conway, Mrs. Eileen, Castroville, Calif.
Conway, Jeanne W., Alexandria ,Va.
Conyers, Mrs. Mary M., Wilson, N.C.
Cook, Gerald, Santa Fe, N. Mex.
Cook, James, Little Rock, Ark.
Cook, Joan, Evanston, Ill.
Cook, Mrs. Laura, St. Augustine, Fla.
Cook, Mrs. Lenore, Swope, Va.
Cooke, Richard S., East Orange, N.J.
Copeland, Sister Marie Estelle, Pittsburgh, Pa.
Copenhaver, Mrs. Evelyn H., Morganton, N.C.
Copperud, Mrs. Damaris, Berkeley, Calif.
Corbett, Edward, Baton Rouge, La.
Corbett, Mrs. Harriet W., Allison Park, Pa.
Corbett, Mrs. Marcia, Baton Rouge, La.
Corcoran, Patricia, Stevens Point, Wis.
Cordano, Waldo, Delavan, Wis.
Corder, Mrs. Louise, Jacksonville, Ill.
Coretti, Marie L., Romney, W. Va.
Corfield, Joan, Santa Ana, Calif.
Coriale, Rose, Utica, N.Y.
Corin, Mrs. Janet, Stoughton, Mass.
Cornett, R. Orin, Laurel, Md.
Corson Harvey Jay, Cincinnati, Ohio
Corson, Mark, Reseda, Calif.
Cosart, Mrs. Anna R., Oroville, Calif.
Costello, Mrs. Catherine, Brooklyn, N.Y.
Costello, David, Dixon, Ill.
Costello, Mrs. Elaine W., Dallas, Tex.
Costello, Sister Frances, Brooklyn, N.Y.
Costello, Sister Katherine, Brooklyn, N.Y.
Costello, Sister Maura, Lake Ronkonkoma, N.Y.
Costin, Mrs. Mary Ann, Atlanta, Ga.
Cottrell, R. S., Washington, D.C.
Couch, Janice, Verona, Va.
Coupland, Howard, Walnut Creek, Calif.
Courtois, Mrs. Barbara O., Redondo Beach, Calif.
Couthen, Albert, West Hartford, Conn.
Covalinski, Richard, Morganton, N.C.
Covell, Mrs. Mary P., White Plains, N.Y.
Coviello, Mrs. Christine, Nesconset, N.Y.
Covitt, Mrs. Karen, New York, N.Y.
Cowan, Mrs. Inez, Knoxville, Tenn.
Cowden, Chandler W., Washington, D.C.
Cox, David B., St. Augustine, Fla.
Cox, Mrs. Diane, Rome, Ga.
Cox, Jack, Bluffs, Ill.
Cox, John T., St. Augustine, Fla.
Craig, Dr. William N., Pittsburgh, Pa.
Crain, Mrs. Carol, Baton Rouge, La.
Crain, Robert E., Jackson, Mich.
Crain, Mrs. Sharon, Muncie, Ind.
Crammate, Alan B., Adelphi, Md.
Crandall, Kathleen J., Evanston, Ill.
Crane, Norman, White Plains, N.Y.
Crawford, Diane E., Lakewood, Colo.
Crawford, Mrs. Gladys H., Tallahassee, Fla.
Crawford, Mrs. W. D., Summitt, N.J.
Cribbin, Rev. Thomas F., Brooklyn, N.Y.
Crichlow, Hazel, St. Augustine, Fla.
Crider, Woodie H., Cave Spring, Ga.
Crist, Mrs. Nancy L., Columbus, Ohio
Crittenden, Dr. Jerry B., Tampa, Fla.
Crockett, M. H., Raleigh, N.C.
Croft, Mrs. Betty, Staunton, Va.
Cronce, Leon Roy, Lebanon, N.J.
Cronlund, Judi Ann, West Hartford, Conn.
Cronlund, Philip S., West Hartford, Conn.
Cronin, Frances, Bronx, N.Y.
Crookham, Mrs. Ramona, Council Bluffs, Iowa
Crosby, Yolande, Evanston, Ill.
Crossett, Mrs. Sue, Rochester, N.Y.

Crossman, Agnes E., Sequim, Wash.
Crosson, Mrs. Carol K., Washington, Pa.
Crouch, Mrs. Marcia B., Dallas, Tex.
Crow, Arthur, Little Rock, Ark.
Crowe, Betty Ann, Evanston, Ill.
Crowley, Jean Marie, Buffalo, N.Y.
Croy, Mrs. Helen L., Balmoral, Man., Canada
Crozer, Norman, Northridge, Calif.
Crutchfield, Mrs. Bashie, Morganton, N.C.
Crutchfield, Paul, Morganton, N.C.
Crutchfield, Paul B., Jr., St. Augustine, Fla.
Cruzan, Gary, Seattle, Wash.
Culatta, Mrs. Shelby F., Pittsburgh, Pa.
Culberson, Mrs. Mildred, King's Mountain, N.C.
Culbreath, Mrs. Cleo, Austin, Tex.
Cullen, Sister Frances, Randolph, Mass.
Cullen, Mrs. V., Chicago, Ill.
Cullison, Sammy K., Indianapolis, Ind.
Culton, Paul M., Huntington Beach, Calif.
Culverhouse, Mrs. Patsy, Fulton, Mo.
Cunningham, Dean, Austin, Tex.
Cunningham, Mrs. Dorine L. Carrollton, Tex.
Cunningham, Mrs. Hisako, Bronx, N.Y.
Cunningham, Mrs. Jane E., Seattle, Wash.
Cunningham, Mrs. Patricia, Austin, Tex.
Cunningham, Paul J., Washington, D.C.
Curchin, Ames B., West Webster, N.Y.
Curlee, Mrs. Pamela, Denver, Colo.
Curran, Sister Margaret, Randolph, Mass.
Currey, Robert, Council Bluffs, Iowa
Curry, Mrs. Irma, Delavan, Wis.
Curry, Mrs. Judy, Tucson, Ariz.
Curry, Mrs. P. Ruth, Pittsburgh, Pa.
Curry, Mrs. Sadie M., Hampton, Va.
Curtis, Gary A., West Hartford, Conn.
Curtis, Marie, Baton Rouge, La.
Curtis, Robert, Little Rock, Ark.
Curtis, Shirley, Rochester, N.Y.
Cusack, Dorothy Kay, Philadelphia, Pa.
Custer, David, Boulder, Colo.
Custer, Gretchen, King of Prussia, Pa.
Czernicki, Edward E., Romney, W. Va.
Czernicki, Mrs. Norma F., Romney, W. Va.

D

Dacey, Edward L. Jr., Newark, N.J.
Daggett, Mrs. Jeanne O., East Granby, Conn.
D'Agostino, Mrs. Dorothy, Baton Rouge, La.
Dahlquist, Mrs. Doris, Vancouver, Wash.
Daigle, Rev. Robert E., Houston, Tex.
Dail, Mrs. Sue B., Wilson, N.C.
Dakin, Charles, Vancouver 8, B.C., Canada
Dale, Joan V., Winnipeg 13, Man., Canada
Dailey, Thomas, Great Falls, Mont.
Dalton, Mrs. Judith, Tucson, Ariz.
Daly, Marcia, Laurel, Md.
Damon, Mrs. Faith, Vancouver, Wash.
Damrau, R. Terry, Jacksonville, Ill.
Dancy, Mrs. Omelia S., Louisville, Ky.
Daniels, Mrs. Beatrice R., Chattanooga, Tenn.
Daniels, Mrs. Margaret, Vancouver, Wash.
Darby, Albert W., Bristol, Conn.
Darcy, Rev. Walter J., New York, N.Y.
Dargay, Jeanne A., Minneapolis, Minn.
Dark, Ann, Fulton, Mo.
Darnell, William T., Rochester, N.Y.
Darrah, Mrs. Virginia M., Glendora, Calif.
Dattilo, Mrs. Mildred J., Bristol, Pa.
Daube, Charges G., Washington, D.C.
D'Audney, Mrs. Weslee, Omaha, Nebr.
Daugherty, Jamie Barbara, Louisville, Ky.
Daugherty, Thomas, Shirley, N.Y.
Daulton, Mrs. Dorothy A., Columbus, Ohio
Davidowitz, David A., Nanuet, N.Y.
Davidson, Lynn, Riverside, Calif.
Davies, Mrs. Lois, Monroeville, Pa.
Davies, Patricia, Casper, Wyo.
Davila, Robert R., White Plains, N.Y.
Davis, Alice Jean, Oxnard, Calif.
Davis, Anne, Staunton, Va.
Davis, Mrs. Bettie, Austin, Tex.
Davis, Mrs. Bilye F., Irving, Tex.
Davis, Bob, Cave Spring, Ga.
Davis, Cecil B., Jackson, Miss.
Davis, Mrs. Charis, S. Henrietta, N.Y.
Davis, Clarence, Fulton, Mo.
Davis, Dorothy, Westbrook, Maine
Davis, Mrs. Eugenia M., Philadelphia, Pa.
Davis, Mrs. Helen, Fulton, Mo.
Davis, Henry B., Inman, S.C.
Davis, Mrs. Jean, Fulton, Mo.
Davis, Mrs. Joan, Rochester, N.Y.
Davis, Mrs. Joy B., Roanoke, Va.
Davis, Dr. Lawrence, Sioux City, Iowa
Davis, Mrs. Lois, Jackson, Miss.
Davis, Michael, New York, N.Y.
Davis, Nancy C., Pittsburgh, Pa.
Davis, Nancy H., Morganton, N.C.
Davis, Richard O., Fulton, Mo.
Davis, Robert, Austin, Tex.
Davis, Mrs. Ruth P., Hatfield, Pa.
Davis, Mrs. Thomasine, Austin, Tex.
Davis, Vernon W., Henrietta, N.Y.
Davis, W. Robinson, Fulton, Mo.
Davis, Walter S., Livonia, N.Y.
Davis, Mrs. Wilma H., Cave Spring, Ga.
Dawkins, David, Sulphur, Okla.

Dawson, Mrs. Elaine, Milton, Fla.
Dawson, Mrs. Elizabeth S., Wilson, N.C.
Dawson, Robert T., St. Augustine, Fla.
Day, Harvey D., San Francisco, Calif.
Day, Mrs. Tillie, Shaker Heights, Ohio
Dean, Mary F., Jackson, Miss.
Deardoff, Mrs. Adelia D., Dallas, Tex.
DeBold, Mrs. Joanne, Webster, N.Y.
DeCecco, Mrs. Erna, Indianapolis, Ind.
Decherd, Mrs. Helen, Austin, Tex.
Decker, Anne M., Lansing, Mich.
Decker, Nancy, Baltimore, Md.
Declan, Sister Mary, Randolph, Mass.
Derrick, Mrs. D. W., West Hartford, Conn.
DeFace, Kathleen, Dallas, Tex.
DeFalco, Mrs. Karen, Des Plaines, Ill.
Degler, John M., Willow Grove, Pa.
deGuzman, Felicisima P., Baltimore, Md.
DeHart, Kathie, Mt. View, Calif.
Deist, Mrs. Marlene H., Goodyear, Ariz.
DeIuliis, Rita A., Pittsburgh, Pa.
DeJonghe, Mrs. Susan E., Tucson, Ariz.
Dela Cruz, Rita H., Olathe, Kans.
d'Elia, Mrs. Toshiko, Ridgewood, N.J.
DeLaughter, Betty L., Wilson, N.C.
Dellis, Mrs. Sally, Riverside, Calif.
Delmonte, Mrs. Orlene G., Palos Verdes Est., Calif.
DeLuca, Mrs. Marianne, Pleasant Hill, Calif.
DeLyser, Ann, Rochester, N.Y.
DeMarco, Rev. Peter A., Southport, Conn.
Dement, Nyna Sue, Faribault, Minn.
Demeza, Dr. Joseph G., Belleville, Ont., Canada
Demme, Mrs. Virginia, Vancouver, Wash.
Demskis, Christy, Newark, N.J.
DeNardin, Mrs. Sally L., Indianapolis, Ind.
Denight, Mrs. Charlotte, Jacksonville, Ill.
Deninger, Michael L., Rochester, N.Y.
DeNio, Dr. James N., Rochester, N.Y.
Denis, Taras B., Elmsford, N.Y.
Denney, Mrs. Laurie, Wilmington, Del.
Dennis, Goldie Nadine, Monroe, Mich.
Dennis, Sharyl A., Berkley, Mich.
Dennis, William, No. Little Rock, Ark.
Denno, Bruce W., Fenton, Mich.
Denton, David M., Frederick, Md.
Denton, Mr. Sudie K., Wilson, N.C.
deRose, Mrs. Rae, Newington, Conn.
Desmarais, Rev. Camille, West Hartford, Conn.
Desmarais, Sister Judith I., Vancouver, Wash.
Desmarais, Mrs. Marjorie, West Hartford, Conn.
DeSoto, Mrs. Eunice J., Tacoma, Wash.
Desrosier, Mrs. Shirley, Granby, Conn.
Desrosier, Thomas, Granby, Conn.
Deuel, Alfred, Talladega, Ala.
Deuel, Harold C., Valdese, N.C.
Deuel, Mrs. Patricia, Valdese, N.C.
Dever, Mrs. Jane, Talladega, Ala.
Devereaux, Robert, Vancouver, Wash.
Deville, John, Baton Rouge, La.
Devine, Norman, Council Bluffs, Iowa
DeVinney, Charles, Vancouver, Wash.
Devito, Mrs. Donna, Staunton, Va.
DeVito, Rocco, Staunton, Va.
DeVore, Margaret, Casper, Wyo.
DeVoss, Margaret, Bloomington, Ill.
Dewart, Mrs. Ann, Prides Crossing, Mass.
DeYoung, Peggy, Ypsilanti, Mich.
Diagonale, Josephine C., Hyattsville, Md.
DiAgostino, Louise T., Roselle Park, N.J.
Dial, Helen, Jacksonville, Ill.
Diamant, Jay J., Greenbelt, Md.
Diarmit, Mrs. Loretta, Salem, Oreg.
Dickens, Mrs. Hattie, Morganton, N.C.
Dickens, Ruth C., Hamilton, Va.
Dicker, Mrs. Eva, Fox Point, Wis.
Dicker, Dr. Leo, Bayside, Wis.
Dickerson, Mrs. Vassar D., Houston, Tex.
Dickins, Raymond E., Vancouver 9, B.C., Canada
Dickinson, Mrs. Mildred, Olathe, Kans.
Dickman, Mrs. Eileen, Southhampton, L.I., N.Y.
Dickson, Mrs. Alice E., Pittsburgh, Pa.
Dickson, George W., Pittsburgh, Pa.
DiCola, Mary Ann, Danville, Ky.
Diebold, Martin H., Tampa, Fla.
Diesel, Susan, Little Rock, Ark.
Dietrich, Kristine, Baton Rouge, La.
Dietz, Mrs. Nancy, Knoxville, Tenn.
Dillard, Connor L., Cave Spring, Ga.
Dillingham, Elmer, Morganton, N.C.
Dillon, Mrs. Florence H., Santa Fe., N. Mex.
Dillon, Dr. Thomas J., Santa Fe, N. Mex.
DiMartino, Rafaella, Belleville, N.J.
Dineen, S., Edmonton 61, Alb., Canada
Dingledine, Wayne, Staunton, Va.
Diot, Mrs. Virginia, Vancouver, Wash.
Dirst, Richard D., West Hartford, Conn.
DiSanto, James V., Pittsburgh, Pa.
Disheroon, Dona G., Houston, Tex.
DiSomma, Mrs. Elizabeth, White Plains, N.Y.
Dispenza, Mrs. Herlana, Baton Rouge, La.
Dixon, Mrs. J. Lynn, Rochester, N.Y.
Dixon, Mrs. Linda, Jacksonville, Ill.
Dixon, Marguerite C., Pittsburgh, Pa.
Dixon, Mrs. Mary T., Baton Rouge, La.
Doane, Mrs. Glenna N., Kissimmee, Fla.
Dobecki, Janet S., Indianapolis, Ind.

Dobozin, Diane, Buffalo, N.Y.
Dodds, Ronald G., Milton, Ont., Canada
Dodge, R. Douglas, Frederick, Md.
Doe, Suzanne, E. Rochester, N.Y.
Doerfler, Leo G., Pittsburgh, Pa.
Doerger, Rev. Stanly D., Cincinnati, Ohio
Doerr, Mrs. Linda, Jacksonville, Fla.
Doheny, Dolores B., Brooklyn, N.Y.
Donald, Maureen Mitchell, Vancouver 8, B.C., Canada
Donald, Nira Janell, Jackson, Miss.
Donaldson, Mrs. Mildred, Vancouver, Wash.
Donaldson, Rita J., Overland Park, Kans.
Donaldson, Mrs. Faye L., Oklahoma City, Okla.
DonAroma, Mrs. Geraldine B., West Hartford, Conn.
Doncaster, Mrs. Lana, Knoxville, Tenn.
Donnelly, Martha, Flint, Mich.
Donoghue, Robert, Evanston, Ill.
Donohoe, Sister Anne, Randolph, Mass.
Donohue, Judith, Buffalo, N.Y.
Doran, William J., East Orange, N.J.
Dorr, Rev. Paul, Jackson, Miss.
Dorrance, Mrs. Patricia K., Sim Valley, Calif.
Dorsey, Cecelia, Jackson, Miss.
Dorsey, Eugene, Jackson, Miss.
Doucette, Mrs. Anna, Baton Rouge, La.
Doucette, Neil, Baton Rouge, La.
Doucette, Reno, Enfield, Conn.
Doty, Don, Sulphur, Okla.
Douglas, A. W., Austin, Tex.
Douglas, Mrs. Josie W., Wilson, N.C.
Dovey, Mrs. Mildred L., Pittsburgh, Pa.
Dow, Mrs. Susan, Lake George, N.Y.
Dowd, Mrs. Helen M., Indianapolis, Ind.
Dowling, Michael, Tonawanda, N.Y.
Dowling, Patrick J., Spartanburg, S.C.
Dowling, William E., Oakland, Calif.
Doyle, James E., Davenport, Iowa
Drackley, Bruce, Delavan, Wis.
Drake, Dennis, Council Bluffs, Iowa
Drake, Donna F., Little Rock, Ark.
Drake, Mrs. Gladys, Denton, Tex.
Drake, Nancy P., North Chili, N.Y.
Drake, Race, Staunton, Va.
Drake, Mrs. Sue, Austin, Tex.
Drasin, Mrs. Gertrude, Santa Fe, N. Mex.
Dray, Dawn, El Centro, Calif.
Dray, Mrs. Gerry, El Centro, Calif.
Dreistadt, Sister Justina, Pittsburgh, Pa.
Drennen, Mrs. Nina M., San Diego, Calif.
Dresbach, Mrs. Connie E., Columbus, Ga.
Drexler, Mrs. Geraldine B., Rahway, N.J.
Driscoll, Mrs. Inez M., Houston, Tex.
Drozd, Diane Marie, Riverhead, N.Y.
Drury, Virginia, Brooklyn, N.Y.
Dry, Edward B., Portland, Maine
Dubard, Etoile, Hattiesburg, Miss.
DuBois, Mrs. Ruth, Buffalo, N.Y.
Dudek, Mrs. Joan, Buffalo, N.Y.
Duff, Judith A., Arlington, Va.
Duffy, Mrs. Barbara, Webster Groves, Mo.
Duggan, Sister Bernadette, Randolph, Mass.
Duick, Charles, Delavan, Wis.
Duick, Mrs. Edra, Delavan, Wis.
Dukes, Mrs. Edythe, Knoxville, Tenn.
Duncan, Mrs. Catherine D., New Milford, N.J.
Duncan, Mrs. Victoria A., Colona, Ill.
Dunham, Mrs. Maude, Delavan, Wis.
Dunn, Mrs. Marie P., West Hartford, Conn.
Dunn, Perl L., St. Paul, Minn.
Dunnell, Nancy S., St. Augustine, Fla.
Duprez, Mrs. Daryl, Sewell, N.J.
Duresky, Mrs. Margaret S., Berea, Ohio
Durfee, Mrs. Constance, Rochester, N.Y.
Durham, Mrs. Katherine, Danville, Ky.
Durham, Mary L., Spartanburg, S.C.
Durham, Mrs. Sibbie, Danville, Ky.
Duryee, Hazel P., Alhambra, Calif.
Dutton, Mrs. Delma W., Santa Monica, Calif.
Dwyer, Mrs. Melanie E., Santa Fe, N. Mex.
Dwyer, Rev. Robert D., Rome, N.Y.
Dye, Judy E., Spartanburg, S.C.
Dyer, Dyann, Tulsa, Okla.
Dyer, Kathryn I., Springfield, W. Va.
Dyer, Lyana L., Columbus, Ohio
Dyke, Mrs. Hazel M., Frederick, Md.
Dykes, Earlene, Indianapolis, Ind.
Dykman, Maj. Carl J. (Ret.), San Antonio, Tex.
Dziurzynski, Stanley, Knoxville, Tenn.
Dzurick, Mrs. Sarah, Fulton, Mo.
Dzurick, Russell, Fulton, Mo.

E

Eads, Mrs. Frances, Little Rock, Ark.
Eagney, Peggy, Bronx, N.Y.
Earnest, Mrs. Leslie, Greenfield, N.H.
Eastman, Gilbert C., Bowie, Md.
Eatmon, Mrs. Clara K., Wilson, N.C.
Eaton, Mrs. Marian, N. Hollywood, Calif.
Eberle, Mrs. Marsha, San Jose, Calif.
Eckstein, William, Little Rock, Ark.
Eddleton, Judith E., Ashland, Va.
Edelin, Patricia, Washington, D.C.
Eder, Martha, Rochester, N.Y.
Edgar, Mrs. Selma, Falmouth Foreside, Maine
Edmonson, Mrs. Ruby, Austin, Tex.
Edmunds, Henry C., Knoxville, Tenn.

Edmunds, Mrs. Josie, Knoxville, Tenn.
Edwards, Mrs. Carol L.. Sheboygan, Wis.
Edwards, Davis, Danville, Ky.
Edwards, Diana, Cincinnati, Ohio
Edwards, Mrs. Edna G., Las Cruces, N. Mex.
Edwards, Eleanor, New Boston, N.H.
Edwards, Ernest C., Augusta, Ga.
Edwards, Fern L., Washington, D.C.
Edwards, Robert M., Las Cruces, N. Mex.
Edwards, Ruth, Delavan, Wis.
Efken, Seig F., Torrance, Calif.
Egbert, Mrs. Ethel, Battle Ground, Wash.
Egbert, Jamice, Omaha, Nebr.
Egbert, A. Marie, Colorado Springs, Colo.
Egbert, William, New York, N.Y.
Ehr, Willa J., Gooding, Idaho
Ehrman, Mrs. Jeannette G., Pittsburgh, Pa.
Eichelberger, Nancy, Cleveland, Ohio
Eichenlaub, Marynell, Drexel Hill, Pa.
Eifert, Helene M., Trenton, N.J.
Eipper, Mrs. Pat J., Sacramento, Calif.
Eisen, Carol, Santa Fe, N. Mex.
Eisenberg, Roslyn, Santa Fe, N. Mex.
Eisenstark, Mrs. Eileen, Palo Alto, Calif.
Eley, Mrs. Kathleen R., Lansing, Mich.
Eliason, Mrs. Stephanie, Fresno, Calif.
Elkins, Donna K., St. Augustine, Fla.
Elkins, Mrs. Gertrude, Morganton, N.C.
Ellefson, John, Sioux Falls, S. Dak.
Ellefson, Mrs. Margaret, Sioux Falls, S. Dak.
Elliott, Mrs. Judith, Tulsa, Okla.
Elliott, Judy G., Sulphur, Okla.
Elliott, Neilius Leroy, Riverside, Calif.
Elliott, Mrs. Patricia, West Hartford, Conn.
Elliott, Peter T., Knoxville, Tenn.
Elliott, Dr. Woodrow W., Talladega, Ala.
Ellis, Mrs. Becky, Champaign, Ill.
Ellis, Mrs. Betty R., Louisville, Ky.
Ellis, Charles, Sioux Falls, S. Dak.
Ellis, Mrs. Irene, Eggertsville, N.Y.
Ellis, Mrs. Virginia C., Trenton, N.J.
Elmore, Marilyn R., Minneapolis, Minn.
Elrod, Mrs. Helen I., No. Little Rock, Ark.
Elstad, Mrs. Mary C., Denver, Colo.
Embree, Judith, Buffalo, N.Y.
Embry, Joan, St. Augustine, Fla.
Emerick, Aletha, Riverside, Calif.
Endelman, Sue, Champaign, Ill.
Enders, Mrs. Marilyn, Rochester, N.Y.
Engel, Dr. Dean C., Grand Forks, N. Dak.
Engert, Bradley E., Jacksonville, Ill.
Engle, Mrs. Janet, Jacksonville, Ill.
English, Millard B., Romney, W. Va.
Enola, Ilmari A., Brattleboro, Vt.
Eppich, Cynthia D., Cleveland, Ohio
Epps, Mrs. Margaret G., Newport News, Va.
Epstein, Gerald, Pomona, Calif.
Erb, Mrs. Sherry, Barrington, N.J.
Erickson, Catherine R., Onamia, Minn.
Erickson, Christine, Delavan, Wis.
Erickson, Delbert, Omaha, Nebr.
Erickson, Mrs. Genevra, Salem, Oreg.
Erickson, William, Salem, Oreg.
Erikson, Ellen B., Alexandria, Va.
Erlacher, Mrs. Mary Lou, Delavan, Wis.
Erlandson, Delores, Tucson, Ariz.
Ertel, Mrs. Carol, West Seneca, N.Y.
Esterline, Albert C., Faribault, Minn.
Esterline, Mrs. Lucille B., Faribault, Minn.
Estes, Mrs. Linda, Austin, Tex.
Etheridge, Mrs. Caroline F., Riverside, Calif.
Etheridge, Mrs. Mildred C., Pittsburgh, Pa.
Etheridge, Mrs. Rose, Knoxville, Tenn.
Etherington, James R., Milton, Ont., Canada
Eubanks, Mrs. Maryann, San Antonio, Tex.
Evans, Cathy A., San Antonio, Tex.
Evans, Mrs. Delores R., St. Augustine, Fla.
Evans, Elva E., Wilson, N.C.
Evans, Mrs. R. Hugh, Santa Maria, Calif.
Evans, Larry, Austin, Tex.
Evans, Phelps, Danville, Ky.
Evans, Mrs. Susan L., Sun City, Ariz.
Evans, Mrs. Sue, Danville, Ky.
Evans, Mrs. Wilma, Austin, Tex.
Evelsizer, Dr. Ronald, University, Ala.
Evelyn, Mrs. Anita G., Perkasie, Pa.
Everett, Mrs. Sue W., Romney, W. Va.
Everhart, Bonnie G., Wheeling, Ill.
Eversden, Mrs. Marguerite V., Narbeth, Pa.
Eyler, Buzz, Grover City, Calif.
Eymard, Sister Mary, Randolph, Mass.

F

Fagan, Mrs. Ernestine, Colorado Springs, Colo.
Fahey, Mrs. Celia Joan, Riverside, Calif.
Fair, Mrs. Ellen J., Carmel, Ind.
Fair, Janice D., Seattle, Wash.
Fairman, Donald W. Great Falls, Mont.
Fairwood, Mrs. Barbara G., Delavan, Wis.
Fajgier, Ann, Morrisville, Pa.
Falberg, Mrs. Dorothy M., Olathe, Kans.
Falberg, Roger, Seattle, Wash.
Faler, Barbara, Ann Arbor, Mich.

Fallon, Denis P., West Hardford, Conn.
Falb Sharon M., W. St. Paul, Minn.
Fanshaw, Mrs. Wanda S., Cave Spring, Ga.
Fant, Mrs. Christine, Austin, Tex.
Fant, Louie J. Jr., Northridge, Calif.
Fantauzzo, Dominick J., Rochester, N.Y.
Fargnoli, Mrs. Joan, Clinton, N.Y.
Farman, J. Jay, Rome, N.Y.
Farmer, Mrs. Betty M., Rock Island, Ill.
Farmer, Mrs. Brenda B., Birmingham, Ala.
Farmer, Gary W., Wilson, N.C.
Farmer, Mrs. Mary F., Houston, Tex.
Farnsworth, Nancy, Oakland, Calif.
Farquhar, Hugh D., Manchester, Conn.
Farrar, Mrs. Cathy, Charlottesville, Va.
Farrell, Joan, New York, N.Y.
Farrell, Joan, Suitland, Md.
Faulkner, Mrs. Lorna H., Bliss, Idaho
Faust, Mrs. Paula, Baton Rouge, La.
Fauth, Mrs. Bette, Riverside, Calif.
Fauth, Edith, Santa Fe, N. Mex.
Fauth, Warren W., Riverside, Calif.
Fazio, Carol Ann, Arlington, Va.
Featherall, Celia, Jermyn, Pa.
Feder, Mrs. Fern, Wilmette, Ill.
Feder, Mrs. Glenda, Dallas, Tex.
Felder, Mrs. Blance B., Baton Rouge, La.
Feldman, Albert, Teaneck, N.J.
Feldman, Larry I., Baldwin, Long Island, N.Y.
Feller, Edward, Jacksonville, Ill.
Feller, Mrs. Patricia, Jacksonville, Ill.
Fendon, Marion D., Avon, Conn.
Fendrich, Richard, Rochester, N.Y.
Fenton, Mrs. Pauline, Gross Pointe Woods, Mich.
Ferber, Rev. A. E., Kansas City, Mo.
Fergason, Stanley, Olathe, Kans.
Ferguson, Mrs. Cheryl, Pine Bluff, Ark.
Ferguson, Mrs. Judy, Little Rock, Ark.
Fernandes, Mrs. Jean, Seattle, Wash.
Fernsler, Mrs. Beulah, Lansing, Mich.
Ferraro, Linda Carol, Woodbridge, N.J.
Ferrick, Sister Margaret, Randolph, Mass.
Ferris, Mrs. Margaret H., Neenah, Wis.
Fertig, Ralph E., El Monte, Calif.
Fest, Paul, Vancouver, Wash.
Fetrow, Richard, Council Bluffs, Iowa
Fewell Jane Hougham, Indianapolis, Ind.
Fewell, Windell, W. Indianapolis, Ind.
Field, Mrs. Beatrice N., Houston, Tex.
Field, Mrs. Cornelia C., Omaha, Nebr.
Fields, Phyllis Irene, Morganton, N.C.
Fike, Mrs. Elsie B., Inman, S.C.
File, Mrs. Hazel, Jacksonville, Ill.
Finch, George, Austin, Tex.
Finke, Arlen, Bayville, N.Y.
Fink, Bill, Daytona Beach, Fla.
Finley, Sister Margaret, Brooklyn, N.Y.
Finnegan, Joe, Swansea, Mass.
Finnestad, Harvey, Delavan, Wis.
Fisher, Mrs. Gwen, Superior, Wis.
Fisher, Jennifer, Tucson, Ariz.
Fisher, Mrs. Lillian N., Tacoma, Wash.
Fisher, Robert Dean, Hyattsville, Md.
Fishler, T. G., Riverside, Calif.
Fisher, Mrs. Nadine L., Riverside, Calif.
Fiske, Karl J., Great Falls, Mont.
Fitch, Dr. James L., Las Cruces, N. Mex.
Fitz-Gerald, Mrs. Della R., Wilson, N.C.
Fitzgerald, Mrs. Jo Ellen, Indianapolis, Ind.
Fitzgibbon, Sister Catherine, Lake Ronkonkoma, N.Y.
Fitzpatrick, Sister Bridgetta, Pittsburgh, Pa.
Flaherty, Sister Margaret, Randolph, Mass.
Flaherty, Mrs. Patia, West Hartford, Conn.
Flame, Linda, Tucson, Ariz.
Flanagan, Carl W., Romney, W. Va.
Flanagan, Mrs. Senath J., Romney, W. Va.
Flathouse, Virgil, Champaign, Ill.
Fleischer, Lawrence R., Berkeley, Calif.
Fleming, Mrs. Nettie, St. Augustine, Fla.
Fleming, Robert G., Morganton, N.C.
Fletcher, Robert, Ogden, Utah
Flint, R. W., Lyndeborough, N.H.
Flint, Richard, Middle Haddam, Conn.
Flister, Sara Louise, Pittsburgh, Pa.
Flood, Dr. James T., Columbus, Ohio
Florop, Mrs. Pearl B., Mystic, Conn.
Flower, Mrs. Barbara, Knoxville, Tenn.
Flower, Warren, Knoxville, Tenn.
Flynn, Frances, W. Hartford, Conn.
Flynn, Marilyn L., Athens, Ga.
Flynn, Mrs. Michele L., Levittown, Pa.
Fogel, Mrs. Dorthea, Lansdale, Pa.
Fogg, Mrs. Margaret A., Newington, Conn.
Fonville, Wilson E., Colorado Springs, Colo.
Foley, Merle J., Frederick, Md.
Forcht, Mrs. Wanda, Vancouver, Wash.
Ford, Elizabeth, Corte Madera, Calif.
Ford, Mrs. Eugenia, Baton Rouge, La.
Ford, Harry P., Naples, N.Y.
Fore, Mrs. Pat, Ardmore, Okla.
Foreman, Jack, Tulsa, Okla.
Forestal, Lawrence, Omaha, Nebr.
Forney Mrs. Joan, Jacksonville, Ill.
Forrest, Joe C., Spartanburg, S.C.
Forry, Mrs. Mary D., Kingsport, Tenn.
Forsberg, Elsie, Detroit, Mich.
Forsyth, Diana, St. Augustine, Fla.

Foster, Elizabeth, Indianapolis, Ind.
Foster, Joan E., Waltham, Mass.
Foster, Sharon, Council Bluffs, Iowa
Foti, John, Van Nuys, Calif.
Fowler, Carrie, St. Augustine, Fla.
Fowler, Mrs. Kate, Morganton, N.C.
Fowler, Robert, Vancouver, Wash.
Fox, Jill, New York, N.Y.
Foy, Jean, Colorado Springs, Colo.
Frakes, Glenn, Colorado Springs, Colo.
Frame, Mrs. Jackie, Fulton, Mo.
Francis, Mrs. Martha, Danville, Ky.
Francis, Mrs. Patricia G., Uncasville, Conn.
Francis, Patricia L., Stonington, Conn.
Frank, Mrs. Claudia, Austin, Tex.
Frank, Diana L., Pittsburgh, Pa.
Franks, J. Rodney, Raleigh, N.C.
Franks, Mrs. Mary D., Raleigh, N.C.
Fraser, Forrest A., Denver, Colo.
Fredericks, Raymond K., Jacksonville, Fla.
Frederking, Rev. Theodore, Phoenix, Ariz.
Freeman, Mrs. Helen, Baton Rouge, La.
Freeman, Jerome, Baton Rouge, La.
Freeman, Mrs. Rhoda, Los Angeles, Calif.
Freeman, Winnie M., Centerville, Utah
French, Mrs. Sophia L., Ann Arbor, Mich.
Freund, Mrs. Dorothy Z., Faribault, Minn.
Frick, Mrs. Alice, Staunton, Va.
Frick, Judy D., Devils Lake, N. Dak.
Frick, Maxwell J., Flint, Mich.
Frick, Mrs. Page, Urbana, Ill.
Frick, Wayne, Staunton, Va.
Frickel, Katherine, San Antonio, Tex.
Friend, Mrs. Jamesine E., Palo Alto, Calif.
Frincke, Marilyn, Royal Oak, Mich.
Froelich, Barbara Jean, New York, N.Y.
Froman, Mrs. Laura, Quincy, Ill.
Frisch, Frances M., Jacksonville, Ill.
Frisina, Dr. D. Robert, Pittsford, N.Y.
Fry, Marjorie, Philadelphia, Pa.
Fuehrer, Janice L., Versailles, Ind.
Fujiyama, Carol F., Monterey Park, Calif.
Fukuzawa, M. Frank, Gardena, Calif.
Fuller, Ren S., Jr., Romney, W. Va.
Fuller, Ted A., Birmingham, Ala.
Fuller, Mrs. Virginia, Benton, Ark.
Fulton, Jean C., College Park, Md.
Fulton, Helen Kay, Wheaton, Md.
Fultz, Vae Rose, Jacksonville, Ill.
Funchess, Dr. Lloyd, Baton Rouge, La.
Funderberg, Mrs. Ruth, Tucson, Ariz.
Funk, Harry E., Overland Park, Kans.
Fusselman, Mrs. Suzanne, Austin, Tex.

G

Gabat, Linda, Morrisville, Pa.
Gage, Mrs. Elizabeth B., Wenham, Mass.
Gagliardi, Donna, Wethersfield, Conn.
Gagnard, Robert T., Metairie, La.
Gaines, Mary J., Cave Spring, Ga.
Gaines, Mrs. Sharon L., Lincoln, Nebr.
Gallagher, Mary Joy, Lombard, Ill.
Gallimore, Ray H., St. Augustine, Fla.
Galloway, Mrs. Gertrude S., Frederick, Md.
Galloway, Victor H., Greenbelt, Md.
Galluzzo, Frank P., Colorado Springs, Colo.
Galvan, Mrs. Betty, Orinda, Calif.
Galvan, John, Orinda, Calif.
Gamble, Mrs. Anne C., Morganton, N.C.
Gannon, Jack R., Silver Spring, Md.
Gannon, Rosalyn L., Silver Spring, Md.
Ganssle, Mrs. Claireanne, Silver Spring, Md.
Gant, Mrs. Evelyn F., Delavan, Wis.
Gant, John R., Delavan, Wis.
Garber, Dr. Carl E., Ypsilanti, Mich.
Garber, Mrs. Nettie Mae, Albany, Calif.
Garcia, Secundino, Santa Fe, N. Mex.
Gardell, Mrs. Edythe, Santa Ana, Calif.
Gardner, Janet, Randolph, Mass.
Gardner, Rosalyn, Washington, D.C.
Garennes, Louis, North Wale, Pa.
Garin, Azucena, Devils Lake, N. Dak.
Garlitz, LaDonna F., Romney, W. Va.
Garner, Diane, Austin, Tex.
Garnett, Christopher B., Jr., Hyattsville, Md.
Garrett, Erpel L., Riverside, Calif.
Garretson, Carol, Wheaton, Md.
Garrison, Jack O., Sulphur, Okla.
Garrison, Mrs. Myra, Omaha, Nebr.
Garrity, James H., Pittsburgh, Pa.
Garrity, Sister Rose Xavier, Pittsburgh, Pa.
Garrity, Mrs. Rosemary P., Pittsburgh, Pa.
Gaskins, Elizabeth A., Spartanburg, S.C.
Gastman, Carl L., San Francisco, Calif.
Gatehouse, James T., Cumberland Center, Maine
Gatehouse, Mrs. Lois T., Cumberland Center, Maine.
Gates, Mrs. Iolla V., Riverside, Calif.
Gates, Dr. Robert R., Fairport, N.Y.
Gates, Mrs. Vivian M., Port Jefferson Station, N.Y.
Gatlin, Theda, Benton, Ark.
Gatmaitan, Mrs. Rosa, Fairless Hills, Pa.
Gaunce, Robert L., Kansas City, Mo.
Gay, Mrs. Mildred, Sulphur, Okla.
Gaylor, Mrs. R. Jane, Santa Susana, Calif.

Gaylord, Mrs. Iola, Glen Alpine, N.C.
Gays, Richard F., Woodbridge, Va.
Geary, Gail, Carbondale, Pa.
Gehlar, Daphne C., Salem, Oreg.
Genetti, Ann M., Kalamazoo, Mich.
Genrich, Randall E., Minneapolis, Minn.
Geohegan, Mrs. Mary R., Ft. Lauderdale, Fla.
George, Mrs. Juanita, Vancouver, Wash.
Gerhardt, Lois, Bayville, N.Y.
Germany, Mrs. Gladys, Trenton, N.J.
Gerson, Eileen, Chicago, Ill.
Gerstman Dr. Hubert L., Boston, Mass.
Giangreco, Dr. C. Joseph, Council Bluffs, Iowa
Gibish, Stella, Pittsburgh, Pa.
Gibson, Joan, Amherst, N.Y.
Gibson, Joy M., Cave Spring, Ga.
Gibson, Vernon, Austin, Tex.
Gibson William, Staunton, Va.
Giddings, Mrs. Mary, Sioux Falls, S. Dak.
Giett, Mrs. Ethel M., West Hartford, Conn.
Giffin, Robert, Council Bluffs, Iowa
Gigler, David, Riverside, Calif.
Gilbert, Ray, Vancouver, Wash.
Gilbert Mrs. Ruth, Forest City, N.C.
Gilchrist, Mrs. Katherine, Talladega, Ala.
Giles, Mrs. Catherine S., Talladega, Ala.
Gilkey, Mrs. Ann, Little Rock, Ark.
Gillespie, Faye, Catassaugua, Pa.
Gillespie, Mrs. Margaret P., Tucson, Ariz.
Gills, Perry W., St. Augustine, Fla.
Gilman, Mrs. Anna, Salem, Oreg.
Gilmer, Mrs. JoAnna H., Valdosta, Ga.
Gilmore, Charles A., Washington, D.C.
Gimpel, Mrs. Christine C., Hyattsville, Md.
Gionfriddo, Mrs. Mary, West Hartford, Conn.
Giordano, Joseph P., Omaha, Nebr.
Giordano, Mrs. Katherine, West Trenton, N.J.
Girvin, Eric, Georgetown, Tex.
Giuliana, Angela, Wood Ridge, N.J.
Glancy, Leonard, Indianapolis, Ind.
Glandon, Judy, Evanston, Ill.
Glattke, Dr. Ted, Menlo Park, Calif.
Glawe, Arleen, Sioux Falls, S. Dak.
Glenn, Charles W., Cave Spring, Ga.
Glenz, Mrs. Grace A., La Crosse, Wis.
Glover, Mrs. Sammie, Centre, Ala.
Glueckllch, Mrs. Kathy, Minneapolis, Minn.
Gobble, Edward M., St. Augustine, Fla.
Goddard, Mrs. Margaret, Rome, N.Y.
Godfrey, Mrs. Ruth W., Jacksonville, Ill.
Godsave, Bruce F., Takoma Park, Md.
Goetter, Marie, Omaha, Nebr.
Goetzinger, Dr. C. P., Olathe, Kan.
Goetzinger, Madelon, Olathe, Kan.
Goetzinger, Mrs. Rita, Olathe, Kan.
Goff, Elma E., Colorado Springs, Colo.
Goforth, Mrs. Amy, Knoxville, Tenn.
Goforth, Mrs. Naomi, Salem, Oreg.
Goldberg, Madeline, Rocky Hill, Conn.
Golden, Emanuel, Bowie, Md.
Goldhammer, Judy, Allston, Mass.
Goldfarb, Mrs. Soralie L., Pittsburgh, Pa.
Goldman, Mrs. Linda, Fullerton, Calif.
Goldman, Merle L., Indianapolis, Ind.
Goldman, Morris, West Haverstraw, N.Y.
Goldman, William H., Columbia, S.C.
Goldman, Warren R., Rochester, N.Y.
Goldsmith, Mrs. Clarice, Salem, Oreg.
Goldstein, Sandra, Columbus, Ohio
Golightly, James V., Morganton, N.C.
Golladay, Mr. Loy E., Rochester, N.Y.
Gonter, Martha A., Buffalo, N.Y.
Gonzales, Mrs. Lorel B., Gooding, Idaho
Gonzales, Ricardo D., Riverside, Calif.
Goodman, Judy, Urbana, Ill.
Goodwin, Mrs. Hazel, Jackson, Miss.
Goodwin, Ronald, West Trenton, N.J.
Gordon, Mrs. Marion, Fulton, Mo.
Gordon, Nancy, Staunton, Va.
Gossett, Mrs. Fannie H., Spartanburg, S.C.
Gover, C. L., Riverside, Calif.
Gowan, Mrs. Yvonne K., Sulphur, Okla.
Gower, Mrs. Nancy, Stanford, Ky.
Gowing, Elizabeth, Knoxville, Tenn.
Graber, Evelyn, Minneapolis, Minn.
Gradnauer, Thomas, West Trenton, N.J.
Graham, Mrs. Carol M., Danville, Ky.
Graham, Diane, Washington, D.C.
Graham, Hallie, St. Augustine, Fla.
Graham, Mrs. Jacqueline, Staunton, Va.
Graham, Lester D., Santa Fe, N. Mex.
Grant, Mrs. June M., San Antonio, Tex.
Grant, Dorothy E., Ann Arbor, Mich.
Grant, Kathy, St. Cloud, Minn.
Grant, Mary B., Indianapolis, Ind.
Grath, Mrs. Donna, Kalamazoo, Mich.
Graunke, Dr. W. Lloyd, Knoxville, Tenn.
Graunke, Mrs. Mildred, Knoxville, Tenn.
Graves, Mary Lee, Dexon, Pa.
Graves, Milton T., Honeoye Falls, N.Y.
Graves, Mrs. Natalie, El Cerrito, Calif.
Gray, Mrs. Helen Joan, Indianapolis, Ind.
Gray, Mr. L. A., Baton Rouge, La.
Gray, Mrs. Virgie P., Spartanburg, S.C.
Gray, Mrs. Virginia Q., Jacksonville, Ill.

Graybill, Mrs. Joanne, Easton, Pa.
Grayburn, Mrs. Kathryn, B., Atlanta, Ga.
Green, Mrs. Blanche J., Baltimore, Md.
Green, Mary Lou, Norfolk, Va.
Green, Mason, Hammond, La.
Green Mrs. Sophie, New York, N.Y.
Green, Mrs. Sylvania M., Spartanburg, S.C.
Greenberg, Bernard L., College Park, Md.
Greenberg, Mrs. Patricia, Newark, Del.
Greene, Mrs. Doris T., Frederick, Md.
Greene, Sandra, Casper, Wyo.
Greene, William A., Frederick, Md.
Greenmun, Mrs. Rosalind R., Elkton, Fla.
Greenwood, Marsha, Carmel, Calif.
Greever, Mrs. Gaynelle, Staunton, Va.
Gregory, Mrs. Noel, Walled Lake, Mich.
Gremillion, Harbey, Baton Rouge, La.
Griffin, Barbara, Buffalo, N.Y.
Griffin, Mrs. Carol L., Oklahoma City, Okla.
Griffin, Constance M., Austin, Tex.
Griffin, Mrs. Linda C., Gulf Breeze, Fla.
Griffin, Sheila, Oakland, Calif.
Griffin, Warren, Woodland Hills, Calif.
Griffith, Mrs. Edra, Olathe, Kans.
Grimm, Judith, St. Paul, Minn.
Grimm, Mrs. Judith, Pittsburgh, Pa.
Grogan, Jacqueline A., Scarsdale, N.Y.
Groman, Mrs. Harry, Lakewood, Ohio
Gross, Myra S., Pittsburgh, Pa.
Groth, John William, Jr., Thornwood, N.Y.
Groves, Ian D., San Jose, Calif.
Grow, Charles B., Danville, Ky.
Grubbs, Mrs. Deenie A., Jackson, Miss.
Gruber, Barbara, Riverside, Calif.
Gruenhagen, Merlen G., Columbus, Ohio
Grunthaner, Thelma, Buffalo, N.Y.
Grunz, Joseph, Faribault, Minn.
Gruss, Betty, Faribault, Minn.
Gruver, Margaret, Portland, Maine
Gualtieri, Mrs. Barbara A., Pittsburgh, Pa.
Guenther, Mrs. Nina, Roland, Ark.
Guess, Mrs. Hester, Santa Rosa, Calif.
Guffey, Ernest, Staunton, Va.
Guido, Eleanor, Yonkers, N.Y.
Guidone, Mrs. R. L., Manhattan Beach, Calif.
Guiles, Paula, Winchester Bay, Oreg.
Guillory, Mrs. LaVera, Baton Rouge, La.
Guilmynott, James, Austin, Tex.
Gulbranson, Claude S., Port Byron, Ill.
Guldager, Lars, Newtonville, Mass.
Gulick, Mrs. Almire B., Yardley, Pa.
Gulick, Mrs. Mabel, Olathe, Kans.
Gulley, Mrs. Carolyn, Danville, Ky.
Gunderson, Rosella, Berkeley, Calif.
Gunson, Kathy, Pennington, N.J.
Gustason, Gerilee, Long Beach, Calif.
Gustafson, Fred I., Colorado Springs, Colo.
Gustafson, Lloyd, Manchester, Conn.
Gustafson, Wayne, Duluth, Minn.
Gustin, Mrs. Mary Jo., Albuquerque, N. Mex.
Guttadore, S. Theodore, Aurora, Colo.
Guziak, Julienne, Stevens Point, Wis.
Gwinner, Robert E., West Chester, Pa.
Gyle, Mrs. Alice M., Pittsburgh, Pa.

H

Hadfield, Mrs. Barbara, Salt Lake City, Utah
Haevers, Donald P., Salem, Oreg.
Hagaman, Wallace R., Belmont, Calif.
Hagan, Mrs. Nancy, Wausau, Wis.
Hagland, Claron, Ogden, Utah.
Hagerman, Mrs. Ethel, Council Bluffs, Iowa
Hahn, Mrs. Elizabeth, Walnut Creek, Calif.
Haines, Mrs. Margaret L., St. Augustine, Fla.
Haines, Mrs. Margaret M., Shanks, W. Va.
Hairston, Ernest, Greenbelt, Md.
Hairston, Jerrie S., Little Rock, Ark.
Haislip, Mrs. Camille, Staunton, Va.
Hailey, C. Philip, Morganton, N.C.
Hajna, Mrs. Ragina, Rome, N.Y.
Halberg, Mrs. Caroline T., West Hartford, Conn.
Halberg, David H., West Hartford, Conn.
Halkbat, Helen, Indianapolis, Ind.
Hall, Mrs. Aileen B., Kensington, Md.
Hall, Mrs. Charlotte, Knoxville, Tenn.
Hall, Mrs. Edna H., Monrovia, Calif.
Hall, Harry Lee, Jacksonville, Ill.
Hall, Jonathan, Kensington, Md.
Hall, Julia C., Tallahassee, Fla.
Hall, Mrs. Maud V., Vancouver 8, B.C., Canada
Hall, Mrs. Nancy H., Scarboro, Maine
Halpern, Dr., Montreal 249, P.Q., Canada
Halstead, Sammie, Big Stone Gap, Va.
Hamel, Clara A., Rochester, N.Y.
Hamilton, Romie L., Wilmington, Del.
Hamlin, Carol L., Morganton, N.C.
Hammer, Fred, Vancouver, Wash.
Hammer, Mrs. Sharon, Vancouver, Wash.
Hammermeister, Dr. Frieda K., Pittsburgh, Pa.
Hammermeister, Mrs. Kersti N., Pittsburgh, Pa.
Hammerschmith, Edward, Monmouth, Oreg.
Hammerstrom, Mrs. Mary J., Omaha, Nebr.
Hammett, Mrs. Louise S., Talledega, Ala.

Hammond, Mary, New York, N.Y.
Hammond, Terry, Rockford, Ill.
Hampshire, Sharon S., Arcadia, Calif.
Hampton, Mrs. Ida W., St. Augustine, Fla.
Hampton, Mrs. Nannie S., Cleveland, Ohio
Hampton, Sherwood, St. Augustine, Fla.
Hamrick, Mrs. Annie B., Hickory Grove, N.C.
Hand, Mrs. Anne, Pocatello, Idaho
Hanes, Mrs. Gertrude D., Pittsburgh, Pa.
Haney, Mrs. Mary R., New York, N.Y.
Hankins, Joseph, Jacksonville, Ill.
Hanks, E. Kendall, Jr., Olathe, Kans.
Hanks, Richard T., Moriarty, N. Mex.
Hannah, Mrs. Jolene B., West Covina, Calif.
Hansen, Elizabeth P., Council Bluffs, Iowa
Hansen, Mrs. Jean L., Sacramento, Calif.
Hanson, Bonnie R., Brooklyn, N.Y.
Hanson, George E., Faribault, Minn.
Hanson, Grace, Austin, Tex.
Hanson, Linda, Portland, Maine
Harden, Mrs. Elizabeth, Staunton, Va.
Harder, E., Edmonton 70, Alberta, Canada
Hardin, Vanda B., Morganton, N.C.
Hardy, Myrtle, J., Rocklin, Calif.
Handy, Vernell, Hampton, Va.
Hargis, Charles H., Knoxville, Tenn.
Hargraves, Britt M., Westminster, Md.
Hargreaves, Alfred, Talladega, Ala.
Harland, Gordon, Tucson, Ariz.
Harkins, Charles T., Pittsburgh, Pa.
Harler, Harry, Council Bluffs, Ia.
Harlow, William H., II, Indianapolis, Ind.
Harms, Melanie J., Alden, Iowa
Harmon, A. B., Louisville, Ky.
Harmon, Mrs. Margaret, Indianapolis, Ind.
Harms, Mrs. Virginia F., Trenton, N.J.
Harned, Sylvia M., Amarillo, Tex.
Harp, Mrs. Jan, Baton Rouge, La.
Harper, Mrs. Beatrice N., Houston, Tex.
Harper, Mrs. Cora W., Brooklyn, N.Y.
Harper, Judith C., Pittsburgh, Pa.
Harper, Mrs. Phyllis, Jacksonville, Ill.
Harper, William, Vancouver, Wash.
Harrington, Dr. John D., Brooklyn, N.Y.
Harris, Archie, Staunton, Va.
Harris, Betty M., Ventura, Calif.
Harris, Mrs. Elizabeth H., Woodbury, Conn.
Harris, Mrs. Isabel I., Baton Rouge, La.
Harris, Jane Gilchrist, Dallas, Tex.
Harris, Jeanne, Chicago, Ill.
Harris, Mrs. Marilyn, Dallas, Tex.
Harris, Mary V., Adamstown, Md.
Harris, Mrs. Rosemary, Fulton, Mo.
Harris, Sarah Louise, Morganton, N.C.
Harris, Wendy, Mill Neck, N.Y.
Harrison, Mrs. Dema, Fulton, Mo.
Harrison, Duane, Ogden, Utah
Harrison, Lloyd A., Fulton, Mo.
Harston, Mrs. Kathlyn A., Houston, Tex.
Hartman, Diane E., Washington, D.C.
Hart, Barbara, Santa Fe, N. Mex.
Hartl, William F., Devils Lake, N. Dak.
Hartley, Harold V., Jr., Clarion, Pa.
Hartley, Mrs. Minnie, Jackson, Miss.
Hartnett, Judith, Lombard, Ill.
Hartwell, Mildred E., Wilson, N.C.
Harvey, Mrs. Marguerite, Sioux Falls, S. Dak.
Harvey, Mrs. Nedra, Rochester, N.Y.
Harvey, Susan J., Hobbs, N. Mex.
Hassell, Jerry, Austin, Tex.
Hast, Mrs. Barbara L., Pittsburgh, Pa.
Hastings, Mrs. Mildred E., Tucson, Ariz.
Hastings, Theodore, Morganton, N.C.
Hatch, Pamela J., Latham, N.Y.
Hatch, W. S., Fulton, Mo.
Hathhorn, Mrs. Patricia, Austin, Tex.
Hattala, Sharon, Binghamton, N.Y.
Haught, Dan R., Romney, W. Va.
Hauptman, Mrs. Doris, West Hartford, Conn.
Hawk, Dr. Elizabeth A., Columbus, Miss.
Hawk, Mark, State College, Pa.
Hawkins, Leroy, Baton Rouge, La.
Hawks, Janet, Portland, Maine
Hawn, Rev. E. Joe, Houston, Tex.
Hawthorne, Mrs. Linda B., Lubbock, Tex.
Hayek, Allen J., Devils Lake, N. Dak.
Hayes, Mrs. Ann, Seattle, Wash.
Hayes, Mrs. Brenda S., Spartanburg, S.C.
Hayes, Mrs. Dorothy M., Madison Wis.
Hayes, Mary, Long Beach, Calif.
Hayes, Mrs. Miriam, West Hartford, Conn.
Hayes, Nita V., Fresno, Calif.
Hayes, Mrs. Patricia, Sulphur, Okla.
Hayman, Mrs. Betty, Little Rock, Ark.
Haynes, Mrs. Janice, Delavan, Wis.
Hayward, Sandra D'Anne, Evanston, Ill.
Healy, Mrs. Catherine, Brooklyn, N.Y.
Healy, Mrs. Mabel, Buffalo, N.Y.
Heath, L. M., Phoenix, Ariz.
Heatwole, Mrs. Helen A., Romney, W. Va.
Heavner, David S., Lincolnton, N.C.
Heavner, Judy, Newton, N.C.
Hebein, Mrs. Jeanne, Dallas, Tex.
Heber, Waldo N., Knoxville, Tenn.
Hebert, Lenard, Greenfield, N.H.

Hecht, Mrs. Joyce, Stockton, Calif.
Heffernan, Patricia K., Conshohocken, Pa.
Hegg, Mrs. Linda, Sioux Falls, S. Dak.
Heidinger, Virginia, Washington, D.C.
Heinberg, Mrs. Jeri, Detroit, Mich.
Heinsohn, Miss C., Winnipeg 9, Man., Canada
Heintzelman, Mrs. Rae L., Hollywood, Calif.
Helgeson, Richard M., St. Paul, Minn.
Helland, Mrs. Judith, Bremerton, Wash.
Heller, Mrs. Nancy E., Indianapolis, Ind.
Hellman, Priscilla, Forest Hills, N.Y.
Helton, Richard H., Danville, Ind.
Henderson, Mrs. Betty L., Morganton, N.C.
Henderson, Charles R., Morganton, N.C.
Henderson, Malcolm T., West Hollywood, Calif.
Henderson, Mrs. Ruth B., Lincoln, Nebr.
Hendren, Glen R., Metairie, La.
Hendren, Rosemarie, Oklahoma City, Okla.
Hendrick, Mrs. C. F., Santa Fe Springs, Calif.
Hendricks, Sister Mary, Buffalo, N.Y.
Hendrickson, Mrs. Terry, Little Rock, Ark.
Hendrix, Emma Lee, West Hartford, Conn.
Heney, Margaret E., North White Plains, N.Y.
Henke, Mrs. Nicole R., Devils Lake, N. Dak.
Henkels, Milo P., Adrian, Mich.
Henneberry, Mary, Brooklyn, N.Y.
Hennessy, Mrs. Anne, Antrim, N.H.
Henninger, Mrs. Susan L., Pittsburgh, Pa.
Henry, Mrs. Catherine A., Houston, Tex.
Henry, Mrs. Johnnie M., Little Rock, Ark.
Henslee, Mrs. Mary J., North Little Rock, Ark.
Hensley, Jack, Austin, Tex.
Hensley, Mrs. Norma, Austin, Tex.
Henson, Linda Sue, Louisville, Ky.
Henwood, Norman, Vancouver, Wash.
Herden, Mrs. Elsie, Webster, N.Y.
Hermann, Elaine, Indianapolis, Ind.
Hernandez, Mrs. Katherine R., Hampton, Va.
Hernandez, Mrs. Marian P., Phoenix, Ariz.
Herrick, Helen M., Philadelphia, Pa.
Herrick, Monroe, Rochester, N.Y.
Herriott, Edith P., Romney, W. Va.
Herrmann, Elaine A., Edgewood, Pa.
Herritt, Edward, Huntington Valley, Pa.
Herrold, Mary D., Romney, W. Va.
Hersey, Mrs. Barbara, Richmond, Calif.
Hersh, Susan S., Los Angeles, Calif.
Hertz, Mrs. Dona, Vancouver, Wash.
Herward, Mrs. Pamela A., Pittsburgh, Pa.
Herzog, Virginia R., Dallas, Tex.
Hesdorffer, Mrs. Arlene G., Dallas, Tex.
Hess, D. Wilson, Rochester, N.Y.
Hester, James, Danville, Ky.
Hesvik, Mrs. Myrna, Sioux Falls, S. Dak.
Heuser, Mrs. Dorothea, Lincoln, Nebr.
Hewett, Ruby Mae, Rome, Ga.
Hibbs, Hannah R., Santa Fe, N. Mex.
Hickey, Mrs. Virginia, Knoxville, Tenn.
Hickman, Marsha D., Morganton, N.C.
Hickman, Mrs. Theresa D., New Brunswick, N.J.
Hicks, Bette D., Frederick, Md.
Hicks, Bruce, Indianapolis, Ind.
Hicks, Dr. Doin E., Washington, D.C.
Higgins, Francis, Beltsville, Md.
Higgins, Mrs. Mildred, Simsbury, Conn.
Highnote, Mrs. Emmalee J., Cave Spring, Ga.
Highnote, Miss Margaret, Hollywood, Calif.
Hiett, Nita J., Tucson, Ariz.
Hilke, Mrs. Rosemary, Scotts Mills, Oreg.
Hill, Alice, Phoenix, Ariz.
Hill, Mrs. Alice, Knoxville, Tenn.
Hill, Mrs. Beulah E., Studio City, Calif.
Hill, Edith M., Washington, D.C.
Hill, Jerry, Sulphur, Okla.
Hill, Linda J., Birmingham, Ala.
Hill, Mrs. Wilma, Long Beach, Calif.
Hilton, Susan, Evanston, Ill.
Hindsman, Mrs. Betty R., Raleigh, N.C.
Hines, Mrs. Mary, Galesville, Md.
Hines, Rudolph C., University Park, Md.
Hines, Walter, Council Bluffs, Iowa
Hinkle, Mrs. Candyce, Little Rock, Ark.
Hinkle, Kathy L., Morganton, N.C.
Hinnant, Leslie, Rochester, N.Y.
Hinton, Mrs. Velma J., Raleigh, N.C.
Hippe, Vernon, Great Falls, Mont.
Hird, Harry J., Riverside, Calif.
Hirte, Darrell J., Gooding, Idaho
Hirte, Mrs. Elena, Gooding, Idaho
Hitch, Jeannette C., Lakewood, Ohio
Hjartarson, Mrs. Helena L., Winnipeg 29, Manitoba, Canada
Hoag, Dr. Ralph L., Rochester, N.Y.
Hoag, Sister Mary Linus, Pittsburgh, Pa.
Hobart, Barbara, Newark, Del.
Hobson, Jean, Staunton, Va.
Hocking, Barbara, Glenview, Ill.
Hodan, Mrs. Janice, Cheektowaga, N.Y.
Hodges, Lois E., Wilson, N.C.

Hodgson, Rev. Daniel A., Garden City, N.Y.
Hodnik, Joseph, Olathe, Kans.
Hodock, Irene, Indianapolis, Ind.
Hoen, Mrs. Charlotte, Austin, Tex.
Hoff, Joel R., St. Augustine, Fla.
Hoffman, Gary V., Sonyea, N.Y.
Hoffmann, Mrs. Kenneth, Sacramento, Calif.
Hoffmeister, Alfred J., West Hartford, Conn.
Hoffmeyer, Dr. Ben E., West Hartford, Conn.
Hoffmeyer, Claude, Danville, Ky.
Hoffmeyer, Mrs. Vera B., West Hartford, Conn.
Hogan, Patricia C., San Mateo, Calif.
Hoke, Mrs. Dona, Bowie, Md.
Holcomb, Elane, Rochester, N.Y.
Holcomb, Mrs. Loretta, Rochester, N.Y.
Holcomb, Marjoriebell S., Tustin, Calif.
Holcomb, Mrs. Martha R., Buena Park, Calif.
Holcomb, Roy K., Tustin, Calif.
Holder, John L., Napa, Calif.
Holdt, Mrs. Betty, Monmouth, Oreg.
Hollamby, Mrs. Harriet, St. Augustine, Fla.
Holland, Bernice, Kalamazoo, Mich.
Holland, Mrs. Kathryn, Encino, Calif.
Holland, Michael, Encino, Calif.
Holloman, Mrs. Evelyn H., Irwin, Pa.
Holman, Gary L., Pittsburgh, Pa.
Holmes, Mrs. Janet K., Indianapolis, Ind.
Holmes, Mrs. Mary Alyce, Rome, Ga.
Holste, Dr. Herman, Detroit, Mich.
Holt, Mrs. Geraldyne M., St. Louis, Mo.
Holt, C. Jackson, Staunton, Va.
Holt, Mrs. Mary Morley, Fulton, Mo.
Holter, E. John, Riverside, Calif.
Homfeld, Shirley, San Mateo, Calif.
Honeycheck, Sister Francis Louise, Pittsburgh, Pa.
Hood, Linda, Flint, Mich.
Hoover, Robert, Austin, Tex.
Hoover, Mrs. Robinette, Austin, Tex.
Hooverson, Gail C., Redondo Beach, Calif.
Hopkins, Mrs. Mary T., Orlando, Fla.
Hoppe, Mrs. Kay N., Gambier, Ohio
Horan, John, East Rockaway, N.Y.
Hord, Mary Jo, Morganton, N.C.
Horn, Mary Jo, Columbus, Ohio
Horner, Mrs. Katherine H., Romney, W. Va.
Horstmann, Mrs. Dorothy, Shelter Island, N.Y.
Horton, Clarence, II, Terry, Miss.
Horton, Mrs. Janet G., Mobile, Ala.
Horvath, Judit, White Plains, N.Y.
Horvath, Richard J., Pittsburg, Calif.
Horwitz, Natalie Rae, Indianapolis, Ind.
Hotard, Mrs. Patricia, Baton Rouge, La.
Hotchkiss, Mrs. Mary S., Morganton, N.C.
Houchin, Elmo, Little Rock, Ark.
Houchins, Rollie R., Shawnee Mission, Kans.
Houk, George A., Indianapolis, Ind.
Houk, Mrs. Judith A., Indianapolis, Ind.
Hourihan, Kathleen, Newark, N.J.
Hourihan, John P., Newark, N.J.
Houser, Jeanne, St. Augustine, Fla.
Houser, Mrs. Margaret S., Vale, N.C.
Hoyme, Mrs. Martha, Sioux Falls, S. Dak.
Howard, Mrs. Elizabeth, Highgrove, Calif.
Howard, Mrs. Helen W., Cleveland, Ohio
Howard, Mistie Gaye, Jacksonville, Ill.
Howard, Wyman, Council Bluffs, Iowa
Howarth, Mrs. Elizabeth, Vancouver, Wash.
Howe, Mrs. Helen A., Redondo Beach, Calif.
Howell, Rev. Gerard J., New Orleans, La.
Howell, Mrs. Vicky Sue, St. John, Kans.
Howze, James, Austin, Tex.
Hoxie, James A., Riverside, Calif.
Hoyle, George M., Gooding, Idaho
Hritz, Ann S., Riverside, Calif.
Hu, Dorothy Y. L., Miami, Fla.
Huang, John, West Hartford, Conn.
Hubal, Mrs. Irene, Jessup, Pa.
Hubbard, Joane P., Portland, Oreg.
Hubbard, Mrs. Winifred, Olathe, Kans.
Huber, Theodore G., Jacksonville, Ill.
Hudek, Judith, Jacksonville, Ill.
Hudson, Mrs. Doris, Tucson, Ariz.
Hudson, Mrs. Elsie, Jackson, Miss.
Hudson, John, Knoxville, Tenn.
Hudson, Mrs. LeNora, Roff, Okla.
Hudson, Mrs. Pansy, Olathe, Kans.
Huff, Mrs. Anna, Delavan, Wis.
Huff, Mrs. Kathryn, Granada Hills, Calif.
Huff, Kenneth F., Delavan, Wis.
Huffman, Beulah, Morganton, N.C.
Huffman, Willhemine, Belleville, Ont., Canada
Hufford, Mrs. Joan, Rialto, Calif.
Hughes, Mrs. Barbara, Greensboro, N.C.
Hughes, Mary Elizabeth, San Antonio, Tex.
Hughes, Robert J., Tucson, Ariz.
Hughes, William, Rome, N.Y.
Hughston, Fred, Talladega, Ala.
Hulse, Mrs. Gladys, Campbell, Calif.
Hultman, Mrs. Cherrie E., West Elizabeth, Pa.
Hultman, Joseph L., West Elizabeth, Pa.
Humbert, Mrs. Lillian, Morganton, N.C.
Humphrey, John A., Knoxville, Tenn.

Humphrey, Mrs. Mary F., Wilson, N.C.
Humphreys, Beverly, Manhattan Beach, Calif.
Humphries, Tom L., Washington, D.C.
Hunt, Mrs. Norene, Sulphur, Okla.
Hunter, Christopher, Gooding, Idaho
Hunziker, Mrs. Aletha, St. Augustine, Fla.
Huot, Lawrence T., Jacksonville, Ill.
Hurd, Uel, Olathe, Kans.
Hurowitz, Mrs. Lucille, Staunton, Va.
Hurry, Mrs. Sharon E., Indianapolis, Ind.
Hursh, Carl R., Monroeville, Pa.
Hurwitz, Tracy A., Penfield, N.Y.
Hutchinson, Meda S., Silver Spring, Md.
Hutto, Danny L., St. Augustine, Fla.
Hutto, Mrs. Mary Ann, St. Augustine, Fla.
Husak, Frank M., Riverside, Calif.
Hutchins, Ida J., Brattleboro, Vt.
Hutton, Mary, Groton, Conn.
Hyden, Eddie, Danville, Ky.
Hyman, Faith, New York, N.Y.
Hyman, Mrs. Shirley B., Newport News, Va.

I

Iannarone, Antonia, Freeport, N.Y.
Igleheart, Mrs. Betty R., Brattleboro, Vt.
Ingleheart, Elliott H., Brattleboro, Vt.
Ihfe, Mrs. Ferne, Lincoln, Nebr.
Iker, Mrs. Rita, Rochester, N.Y.
Iliff, Mrs. Virginia V., Mesa, Ariz.
Imboden, Mrs. Jean, Jacksonville, Fla.
Imme, Nicholas, Baton Rouge, La.
Ingebo, Mrs. Mildred, Devils Lake, N. Dak.
Iofollo, Linda, Las Vegas, Nev.
Irving, Mrs. Peggy, Danville, Ky.
Irgens, Henning, Plainwell, Mich.
Irwin, Carl F., Riverside, Calif.
Irwin, Vincent, Albany, Calif.
Israelite, Neita, Levittown, Pa.
Ivens, Mrs. Marianne M., Houston, Tex.

J

Jablonsky, Marsha, Horsham, Pa.
Jach, Roberta, Antioch, Ill.
Jack, Bruce, Winnipeg 29, Man., Canada
Jackson, Sara C., Richmond, Va.
Jacobs, Mrs. Dorothy M., Oakland, Calif.
Jacobs, Eunice, Waterville, Minn.
Jacobs, Mrs. Joanne, Austin, Tex.
Jacobs, John T., Austin, Tex.
Jacobs, Leo M., Oakland, Calif.
Jacobs, Mrs. Loretta B., Lexington, Ohio.
Jacobsen, John A., Hartford, Conn.
Jacobson, Joan, St. Cloud, Minn.
Jacobson, Mrs. Marilyn, Portsmouth, Va.
Jacobson, Teesah, Ventura, Calif.
Jacoff, Norman, New Rochelle, N.Y.
Jaech, Timothy A., Riverside, Calif.
Jaeger, Gene, Seal Beach, Calif.
Jaenichen, Cora Lee, Gooding, Idaho
Jamar, Mrs. Juaneva F., Scottsdale, Ariz.
Jambor, Mrs. Lenora E., Livonia, Mich.
James, J. Michael, West Hartford, Conn.
Jamison, Mrs. Mary P., Morganton, N.C.
Jankoff, Jacqueline, New York, N.Y.
Janssens, Corinne R., Raleigh, N.C.
Jarmer, Judith, Willingboro, N.J.
Javadekar, Vidya V., Tallahassee, Fla.
Jeanes, Dan C., Dallas, Tex.
Jefferies, Mrs. B. Ann, Hagerstown, Md.
Jeffers, Mrs. Marilyn, Little Rock, Ark.
Jefferson, Sonia W., Baton Rouge, La.
Jemison, Margaret, Beverly Hills, Calif.
Jenkins, Daniel J., Amherst, Nova Scotia, Canada
Jenkins, Mrs. Lorraine V., Salem, Oreg.
Jensen, Donald, Ogden, Utah
Jensen, Verl, Salt Lake City, Utah
Jensen, Dr. Pauline, Flemington, N.J.
Jillette, Arthur G., Jr. Concord, N.H.
Joanita, Sister Mary, Randolph, Mass.
Jobe, Brenda, Mt. View, Calif.
Jobe, Mrs. Joyce, Jacksonville, Ill.
Jochem, Dr. Charles M., West Trenton, N.J.
Johns, Mrs. Elizabeth L., Arlington, Va.
Johns, Stephen G., Denver, Colo.
Johnsen, Mrs. Shea A., Tulsa, Okla.
Johnson, Barbara, DeKalb, Ill.
Johnson, Barbara H., New Haven, Conn.
Johnson, Bonnie, Urbana, Ill.
Johnson, Charles H., Jr., Talladega, Ala.
Johnson, Mrs. Cheryl, St. Augustine, Fla.
Johnson, Dr. Donald D., Rochester, N.Y.
Johnson, Edwin T., Faribault, Minn.
Johnson, Efford, Council Bluffs, Iowa
Johnson, Mrs. Emma, Rome, Ga.
Johnson, Gerald L., Plymouth Meeting, Pa.
Johnson, Helen L., Riverside, Calif.
Johnson, Mrs. Legia, Salt Lake City, Utah
Johnson, Lorna, Rome, N.Y.
Johnson, Mrs. Margaret F., Newport News, Va.
Johnson, Mary Ellen, St. Augustine, Fla.

Johnson, Norris K., Rome, Ga.
Johnson, J. Pamela, West Trenton, N.J.
Johnson, Jeremy Ann, Inglewood, Calif.
Johnson, Louise B., Frederick, Md.
Johnson, Mrs. Marion P., West Hartford, Conn.
Johnson, Mrs. Mary B., Trenton, N.J.
Johnson, Mrs. Mary J., Morganton, N.C.
Johnson, Penelope, Jacksonville, Ill.
Johnson, Rev. Russel P., Warren, Mich.
Johnson, Ross A., Morganton, N.C.
Johnson, Mrs. Ruth, Little Rock, Ark.
Johnson, Shari, Sterling, Ill.
Johnson, Vernon J., Devils Lake, N. Dak.
Johnson, Virginia W., Wilson, N.C.
Johnson, William, Iowa City, Iowa
Johnson, Mrs. Zorann S., Romney, W. Va.
Johnston, Billie K., Jacksonville, Fla.
Johnston, Mrs. Esther, Jackson, Miss.
Johnston, George William, Cincinnati, Ohio
Johnston, Mrs. Margaret, Philadelphia, Pa.
Johnston, Sandra Y., Bellevue, Wash.
Joiner, Allie M., Tucson, Ariz.
Jonas, Sue E., Vale, N.C.
Jones, Aleen, Hooper, Utah
Jones, Mrs. Anne W., Orlando, Fla.
Jones, Mrs. Barbara, Fulton, Mo.
Jones, Bernhardt, E., Tucson, Ariz.
Jones, Mrs. Betty L., Lakewood, Calif.
Jones, Dale, Staunton, Va.
Jones, Mrs. Elizabeth, Fulton, Mo.
Jones, Mrs. Frances C., Houston, Tex.
Jones, Mrs. Geraldine T., Jackson, Miss.
Jones, Gregory W., New York, N.Y.
Jones, Judith J., Redlands, Calif.
Jones, Mrs. Judy, Newark, Del.
Jones, Kate-Helen, Asbury Park, N.J.
Jones, Katherine, Jacksonville, Ill.
Jones, Mrs. Lillie Dell, Jackson, Miss.
Jones, Lois, Vancouver, Wash.
Jones, Mrs. Mary E., Rome, Ga.
Jones, Melody, Canyon, Tex.
Jones, Michael L., Rochester, N.Y.
Jones, Preston, Austin, Tex.
Jones, Rev. Ray L., New Boston, Mich.
Jones, Richard M., Pittsburgh, Pa.
Jones, Uriel C., Knoxville, Tenn.
Jonsson, Ruth, Jacksonville, Ill.
Jordan, Gail A., Morrisville, Pa.
Jordan, Jerald M., Adelphi, Md.
Jordan, Mrs. Shirley C., Adelphi, Md.
Jorgensen, Constance, M., Seattle, Wash.
Joseph, Sister Anita, Randolph, Mass.
Joseph, Mrs. Jean C., Pittsburgh, Pa.
Joseph, Mrs. Jean F., Wethersfield, Conn.
Joseph, Kathy, Utica, N.Y.
Joseph, Sister Thecla, Buffalo, N.Y.
Joshua, Mrs. Valree, Vancouver, Wash.
Joy, Mrs. Sheila, Howell, Mich.
Joyce, Sister Scholastica, Pittsburgh, Pa.
Joyner, Mrs. Margaret E., Wilson, N.C.
Joyner, Mrs. Sandra, Little Rock, Ark.
Julian, Mrs. Pauline M., Dallas, Tex.
Junker, Mrs. Virginia, Baton Rouge, La.
Justl, Mary J., Napa, Calif.

K

Kelly, Mrs. Susan, Delavan, Wis.
Kelly, Walter Paul, Ferris, Tex.
Kelman, Myra, Newark, Del.
Kelsey, Mrs. Martha, Delavan, Wis.
Kempl, Mrs. Edna F., Cave Spring, Ga.
Kenealy, Mary E., Berwyn, Ill.
Kendall, Judith, Jacksonville, Ill.
Kennedy, Ann, Minneapolis, Minn.
Kennedy, Sister Arlene, Lake Ronkonkoma, N.Y.
Kennedy, Eloise, Santa Fe, N. Mex.
Kennedy, Mrs. Janet R., Berrien Springs, Mich.
Kennedy, Patricia, Minnetonka, Minn.
Kennedy, Paul T., Elmsford, N.Y.
Kenney, Sister Bernadette, Randolph, Mass.
Kenney, Sister Karen, Brooklyn, N.Y.
Kent, Alice A., Highland Heights, Ohio
Kent, Margaret S., Braddock Heights, Md.
Keough, Margaret, Jackson, Miss.
Kerikas, Mrs. Sharon N., Salt Lake City, Utah
Kerman, Mrs. Pamela, Torrance, Calif.
Kerr, Bryce, Council Bluffs, Iowa
Kerr, Mrs. Edna M., St. Augustine, Fla.
Kerr, Mrs. Etta C., Jacksonville, Fla.
Kerr, Thomas, St. Augustine, Fla.
Kessel, Mrs. Linda D., New Orleans, La.
Kessler, Annamae, Pittsburgh, Pa.
Kessler, Elayne, Valley Stream, N.J.
Kessler, Mrs. Everlyn, Staunton, Va.
Kessler, Marcia S., Huntington Beach, Calif.
Ketchum, Jack, Holland, Mich.
Ketkar, Sharad, New York Mills, N.Y.
Key, William, Washington, D.C.
Kidd, Mrs. Lois, Little Rock, Ark.
Kieburtz, Mrs. Nancy, Port Jefferson, N.Y.
Kiernan, Sister Mary, Randolph, Mass.
Kile, Margaret, Riverside, Calif.
Kilkenny, Sharon, Whilling, Ill.
Killam, Mrs. Doris, San Angelo, Tex.
Killian, Mrs. Martha, Topeka, Kans.
Kimpton, Sister Luanne, Palo Alto, Calif.
Kincaid, Sue, Sulphur, Okla.

Kinde, Stewart W., Tampa, Fla.
Kindervater, Louis A., Amherst, Nova Scotia, Canada
King, Mrs. Beverly, Winnipeg 13, Man., Canada
King, Dr. Burton, Durham, N.C.
King, Mrs. Dorothy, Knoxville, Tenn.
King, Mrs. Jane, Sioux Falls, S. Dak.
King, Joseph, Kearny, N.J.
King, Linda, Elmhurst, N.Y.
King, Marianne, Dallas, Tex.
King, Nellie H., Romney, W. Va.
King, Mrs. Rose C., Hampton, Va.
Kinnett, Mrs. Cheryll, Jacksonville, Ill.
Kinney, W. R., Sulphur, Okla.
Kirby, Sister Alice Mary, Randolph, Mass.
Kirby, Lois Anne, Colorado Springs, Colo.
Kirchoff, Mrs. Lucille, Pontiac, Mich.
Kirchner, Carl J., Granada Hills, Calif.
Kirchner, Mrs. Susanah, Granada Hills, Calif.
Kirk, Louise, Columbus, Ohio
Kirk, Sister M. Regina, Buffalo, N.Y.
Kirkley, James R., Colorado Springs, Colo.
Kirkley, Mrs. James, Colorado Springs, Colo.
Kirkpatrick, Mrs. Mildred B., Sulphur, Okla.
Kirksey, Mrs. Mary H., Morganton, N.C.
Kirtley, Alexander, Staunton, Va.
Kirtz, Mrs. Catherine, Morrisville, Pa.
Kiser, Mrs. Joni, Tucson, Ariz.
Kitchen, Patricia A., Riverside, Calif.
Kitik, Marian Ellen, Pittsburgh, Pa.
Kitson, Donald, St. Augustine, Fla.
Kitson, Mrs. Mona, St. Augustine, Fla.
Kitt, Charlene B., Sulphur, Okla.
Klafehn, Robert N., Rochester, N.Y.
Klassen, Margaret, Vancouver 8, B.C., Canada
Kleberg, Robert, Austin, Tex.
Kleifgen, Mary Fran, Evergreen Park, Ill.
Klein, Mrs. Mildred, Sioux Falls, S. Dak.
Kleinman, Elsa, Berkeley, Calif.
Kleint, Alma, St. Joseph, Mo.
Klempel, Gustav C., Salem, Oreg.
Klenke, Rev. Paul F., Cincinnati, Ohio
Kleper, Michael L., Rochester, N.Y.
Kline, Mrs. Lorraine, Jacksonville, Ill.
Kling, Cheryl, P., Las Cruces, N. Mex.
Klodd, Bonita, Wausau, Wis.
Klopping, Mrs. Sandra Lee, Tucson, Ariz.
Kloster, Mrs. Louanne, Olathe, Kans.
Knapp, Sally, Santa Fe, N. Mex.
Knauf, Marge, Stevens Point, Wis.
Knight, Mrs. Ann, Chinchilla, Pa.
Knight, Mrs. Judy, Vancouver, Wash.
Knight, Mrs. Mary Jo, Dobbs Ferry, N.Y.
Knight, Susan, Rochester, N.Y.
Knighton, Mrs. Robbi Sue, Salt Lake City, Utah
Knott, Mrs. Maripat, Las Vegas, Nev.
Knox, Mrs. Florence, St. Cloud, Minn.
Koch, Dick, Staunton, Va.
Koch, Fred L., Rochester, N.Y.
Koch, Hartley R., Harbor City, Calif.
Koch, Jacqueline, St. Paul, Minn.
Kocurek, Georgia, Austin, Tex.
Koenig, Mrs. Mary F., Pittsburgh, Pa.
Koepsel, Mrs. Adeline G., Manitowoc, Wis.
Koester, Mrs. Miriam, Gooding, Idaho
Kohl, Mrs. Judith, Kenmore, N.Y.
Koizumi, Gail, Cincinnati, Ohio
Kokocinski, Sister Carol, Buffalo, N.Y.
Kolkmeyer, Laurie, Brookfield, Wis.
Komori, Hiroki, Colton, Calif.
Konceski, Judith, Berwick, Maine
Kondas, Mrs. Janet W., Indianapolis, Ind.
Koob, Ethel M., Indianapolis, Ind.
Koonse, Mrs. Bettie J., Indianapolis, Ind.
Kopas, Joseph T., Romney, W. Va.
Kopra, Dr. Lennart Kipra, Austin, Tex.
Kordansky, Mrs. Ruth, Newark, Del.
Korey, Mary L., Garden City, N.Y.
Korneth, Mrs. Gwendolyn, Sunnyside, N.Y.
Korschgen, Mrs. Margorie, Jacksonville, Ill.
Kosydar, Andrea, Olyphant, Pa.
Kowalewski, Felix, Riverside, Calif.
Kowalewski, Joanne, Allston, Mass.
Kowalewski, Mrs. Laura, Riverside, Calif.
Kowerdovich, Georginna, Bridgeport, Conn.
Koziar, Mrs. Anna, Fulton, Mo.
Koziar, Stephen, Fulton, Mo.
Kraemer, Mrs. Margaret E., Brattleboro, Vt.
Kraft, Mrs. Barbara, Baton Rouge, La.
Kramer, Sandy, Phila, Pa.
Kraus, Donald, Staunton, Va.
Kraus, Jim, Milwaukee, Wis.
Kraus, Norma, New York, N.Y.
Krause, Mrs. Sally A., Long Beach, Calif.
Kretschmer, Robert, Levittown, Pa.
Kriehn, George John, Dallas, Tex.
Kritz, Kenneth W., Frederick, Md.
Kritzner, Lorine, New York, N.Y.
Krohn, Mrs. Emmylou, Council Bluffs, Iowa
Kropa, Jean, Warren, Mich.
Krueger, Christine S., Indianapolis, Ind.

Kruemmer, Edward, Austin, Tex.
Krug, Adele J., Hillcrest Heights, Md.
Kruhm, Mrs. Deborah W., Santa Fe, N. Mex.
Kruse, Mrs. Lola R., Ft. Lauderdale, Fla.
Krusemark, Darlene, Northridge, Calif.
Kruvant, Carol, South Orange, N.J.
Kubis, John J., Rochester, N.Y.
Kubotsu, Miss Teruko, Riverside, Calif.
Kugal, Mrs. Anita S., Morganton, N.C.
Kugal, Stephen, Morganton, N.C.
Kugler, Richard A., Peekskill, N.Y.
Kukleski, Audrian M., Braddock, Pa.
Kuntzman, Mrs. Helen, Covina, Calif.
Kurisu, Irene A., Madera, Calif.
Kurtz, Mrs. Clara, Fulton, Mo.
Kutnyak, Martin M., Toledo, Ohio
Kutzera, Bert, Springfield, Ill.
Kushner, Mrs. Alice, Pasadena, Md.
Kwako, Kathryn A., St. Cloud, Minn.

L

La Sasso, Carol, Oxon Hill, Md.
Lachterman, Daryl R., Dallas, Tex.
Lacy, Mrs. Barbara M., Louisville, Ky.
Ladner, Emil S., Berkeley, Calif.
Ladner, Suzanne, Portland, Maine
Ladouceur, Roger H., Greenfield, N.H.
Ladson, Melvin R., Arlington, Va.
La Duke, Mrs. Bonnie, Ontario, Calif.
Lafeman, Jack, Vancouver, Wash.
Lake, Mrs. Florence, Devils Lake, N. Dak.
Lalonde, Catherine, Cheektowaga, N.Y.
Lamar, Marcella, Battle Creek, Mich.
Lamb, Alfred J., Indianapolis, Ind.
Lamb, Gladys E., West Hartford, Conn.
Lamee, Clyde, St. Augustine, Fla.
Lamm, Mrs. Carolyn O., Spartanburg, S.C.
Lamm, James W., Wilson, N.C.
Lamont, Mrs. Mary, Milton, Ont., Canada
Lamoreaux, Mrs. Marilyn K., East Lansing, Mich.
Lamothe, Danielle, Salt Lake City, Utah
Lane, Helen W., Ogden, Utah
Lane, Mrs. Elnora B., Hampton, Va.
Lane, Kenneth R., Middle Haddam, Conn.
Lane, Leonard G., Washington, D.C.
Lane, Sister Madeline, Randolph, Mass.
Lane, Richard K., Brattleboro, Vt.
Lang, Harry G., Rochester, N.Y.
Lang, Robert W., St. Augustine, Fla.
Lang, Susan, San Antonio, Tex.
Lange, Keith, Salem, Oreg.
Lange, Rebecca, Los Angeles, Calif.
Langford, Betsy, Bandera, Tex.
Lanham, Mrs. Isabel, Fulton, Mo.
Lankford, Mrs. Sibyl, Austin, Tex.
Lanphier, Sharon, San Antonio, Tex.
Lanzi, Peter C., Riverside, Calif.
LaPeer, Richard D., Ann Arbor, Mich.
LaPlace, Victor, New York, N.Y.
Lapp, Margaret A., Vancouver 8, B.C., Canada
Laptad, Mrs. Marese, Olathe, Kans.
Laptad, Mrs. Ruth, Olathe, Kans.
Laramie, Dora Benoit, North Bountiful, Utah
Larned, Janet, New York, N.Y.
Larsen, Harold C., Indianapolis, Ind.
Larsen, Joyce G., Salem, Oreg.
Larson, Dr. Alfred, Normal, Ill.
Larson, Herbert W., Tustin, Calif.
Larson, Janet E., West Hartford, Conn.
Larson, Mrs. Mary Ann, Duluth, Minn.
Larson, Vern, Oklahoma City, Okla.
Larzelere, Mrs. Esther, Kalamazoo, Mich.
LaRue, Mary S., Adelphi, Md.
LaSalette, Sister M., Chicago, Ill.
Lashway, Patricia A., Seattle, Wash.
Lasley, Mrs. Laura J., Lacey, Wash.
Latham, Gladys, Cave Spring, Ga.
Latimer, Mrs. Esperanza C., Santa Fe, N. Mex.
Lauber, Harold, Newark, Del.
Lauderdale, Geraldine, Charlottesville, Va.
Laufer, Mrs. Hazel, Rome, N.Y.
Laukhuf, Lois, Middle Village, N.Y.
Lauritsen, Robert, West St. Paul, Minn.
Laustrup, Margaret, Des Moines, Iowa
Lavender, Thoris L., Ogden, Utah
Lavos, George, Flint, Mich.
Lawery, Barbara E., Randolph, Mass.
Lawler, Louise, Mayfield Village, Hawaii
Lawrence, Margaret P., Romney, W. Va.
Lawrie, Mrs. Bessie, Cave Spring, Ga.
Lawson, Ann Louise, Brooklyn, N.Y.
Lawson, Mrs. Betty, Knoxville, Tenn.
Lawson, Robert, Knoxville, Tenn.
Lawson, Mrs. Pat R., Roff, Okla.
Lawton, Pamela J., Tallahassee, Fla.
Lane, JoAnn, Morganton, W. Va.
Lazarus, Mrs. Beverly K., Bronx, N.Y.
Lazzari, Helen, Weymouth, Mass.
Lazzari, Nina M., Council Bluffs, Iowa
Lazzaro, Mrs. Virginia, Omaha, Nebr.
Leaman, Mrs. Eleanor, Bedford Heights, Ohio
Leard, Shirley L., Mystic, Conn.
LeBlond, John, West Hartford, Conn.
Ledet, Sister Eymard, Lafayette, La.
Lee, Carmen J., Devils Lake, N. Dak.
Lee Mrs. Dorothy W., Wilson, N.C.
Lee, Kenneth C., Orlando, Fla.
Lee, Mrs. Martha M., Houston, Tex.
Lee, Milton, Delavan, Wis.
Lee, Mrs. Naomi, Oakland, Calif.

Lee, Rena M., Salem, Oreg.
Lee, Russell, Jackson, Miss.
Lee, Mrs. Sally, Jackson, Miss.
Lee, Mrs. Virginia Guthrie, Sacramento, Calif.
Leech, Mrs. Virginia L., Pittsburgh, Pa.
Leenhouts, Myron A., Berkeley, Calif.
LeFeaux, Mrs. Dorothy, Baton Rouge, La.
Legard, Mrs. Aquila A., Baton Rouge, La.
Lehnert, Corrine E. G., Towson, Md.
Lehrer, Mr. Noel, North Yonkers, N.Y.
Leigh, Mrs. Ruth B., Provo, Utah
Leinbach, Daniel P., Riverside, Calif.
Leman, Charles W., Flint, Mich.
Lemcke, Mrs. Margaret, Vancouver, Wash.
LeMieux, Robert, Great Falls, Mont.
LeNard, Judith M., Hyattsville, Md.
Lennan, Robert K., Riverside, Calif.
Lennon, Patricia, Bronx, N.Y.
Lenth, J. William, Great Falls, Mont.
Lenox, James P., Morrisville, Pa.
Leo, Sister Anna, Randolph, Mass.
Leonard, Sister David Mary, Pittsburgh, Pa.
Leonardi, Irene, Trenton, N.J.
Leonhardt, Mrs. Carole L., Redlands, Calif.
Leonhardt, Rev. Roger, Devils Lake, N. Dak.
Leonhardt, Mrs. Sonja M. C., Devils Lake, N. Dak.
Leonowich, Miss Toni, East Setauket, N.Y.
Lepisto, Mrs. Helmi, Rock, Mich.
Lerdal, Harriet E., Minneapolis, Minn.
LeRoy, Sister M. Pauline, Buffalo, N.Y.
Lesesne, Mrs. Ruth, Austin, Tex.
Lessam, Micki, Cincinnati, Ohio
Lesser, Sister Rosemary, Brooklyn, N.Y.
Lester, Mrs. Jeannette J., Lansing, Mich.
Letourneau, Sister Nora, Buffalo, N.Y.
LeVasseur, Arthur, Riverside, Calif.
Leviner, Mrs. Peggy, Morganton, N.C.
Levitov, Barbara, Riverside, Calif.
Levy, Mrs. Annie J., Beverly Hills, Calif.
Levy, Mrs. Joyce, Indianapolis, Ind.
Levy, Mrs. Lois, E., Houston, Tex.
Lew, Alicy Y., San Mateo, Calif.
Lewis, A. P., Jr., Sulphur, Okla.
Lewis, Lucy A., Riverside, Calif.
Lewis, Richard G., Evanston, Ill.
LeZak, Dr. Raymond J., Cleveland, Ohio
Liao, Mary Ann, Stoney Brook, N.Y.
Liberato, Joan, Verona, N.J.
Lidstrand, Mrs. Kay, Omaha, Nebr.
Liffengran, Mrs. Luceal, Omaha, Nebr.
Likes, Henry E., Winchester, Ill.
Liles, Mrs. Eleanor H., Wilson, N.C.
Lill, Daniel, Rochester, N.Y.
Linoli, Frank, Brooklyn, N.Y.
Lindblom, Elsie M., Portland, Maine
Lindner, Mrs. Rose E., Floral Park, N.Y.
Lindsey, Emily K., Pearland, Tex.
Lindstrom, August B., Wethersfield, Conn.
Lindstrom, Evelyn A., Gooding, Idaho
Lingerfelt, Mrs. Marilyn, Morganton, N.C.
Linzey, Robert W., Romney, W. Va.
Litchfield, Kendall D., White Plains, N.Y.
Litchfield, Russell O., San Diego, Calif.
Little, James A., Santa Fe, N. Mex.
Lively, Mrs. Lois, Rome, Ga.
Lively, Mrs. Patricia, Baton Rouge, La.
Lloyd, John H., St. Augustine, Fla.
Lloyd, Dr. Lyle L., Washington, D.C.
Lloyd, Marie, Vancouver, Wash.
Loberg, Mrs. Elsie, Torrance, Calif.
Locke, Martha, San Antonio, Tex.
Loebel, Geoffrey A., Santa Fe, N. Mex.
Loeffler, Mrs. Bonnie, South Hayward, Calif.
Loftus, Mrs. Marie, Scranton, Pa.
Logan, Janice L., Salem, Oreg.
Lohman, Edith D., Arlington, Va.
Lolan, Thomas, Cincinnati, Ohio
Lombardi, Ann, Cheektowaga, N.Y.
Long, Edwin, Spartanburg, S.C.
Long, Linda L., Oklahoma City, Okla.
Long, Mrs. Mary, Spartanburg, S.C.
Looney, Patricia A., Pittsburgh, Pa.
Lopinski, Mrs. Betty, Jacksonville, Ill.
Lorene, Sister James, St. Louis, Mo.
Lorenz, Mrs. Katherine K., Hickam AFB, Hawaii
Lorenzen, Richard D., Salem, Oreg.
Lorton, Mary, Pocatello, Idaho
Loughin, Mrs. Beth, Falmouth Foreside, Maine
Loughran, Rosalin D., Riverside, Calif.
Love, Mrs. Sara, Staunton, Va.
Loveday, Thomas, Tucson, Ariz.
Lovelace, Mrs. Frances, Talladega, Ala.
Lowe, Mrs. Carol, Baton Rouge, La.
Lowe, Elizabeth, Charlotte, N.C.
Lowell, Dr. Edgar L., Los Angeles, Calif.
Lowell, Dr. Neil F., Stevens Point, Wis.
Lowenbraun, Dr. Sheila, Seattle, Wash.
Lowman, Rex P., Riverdale, Md.
Lownie, Susan, Buffalo, N.Y.
Lowrie, Mrs. Barbara, South Weymouth, Mass.
Lowry, Jeanne E., Gaithersburg, Md.
Lubbers, Earl R., Tucson, Ariz.
Lucas, Mrs. Arlene B., Pittsburgh, Pa.

Lucido. Mrs. Venus L., Olathe, Kans.
Ludewig, William T., Pacific Palisades, Calif.
Ludivico, Mrs. Ruth G., Pittsburgh, Pa.
Ludwig, Mrs. Warrene E., Aubrey, Tex.
Ludwig, Mrs. Zella, College Park, Md.
Luebke, Melvin W., Mill Neck, N.Y.
Lukmire, Mrs. Nan K., Cambridge, Mass.
Lumpkins, Mrs. Jannette, Portland, Maine
Lund, Elizabeth L., Tulsa, Okla.
Lunestad, Mrs. Sandra, Sycamore, Ill.
Lunna, Brenda J., Bronx, N.Y.
Lupkin, Mrs. Susan, Metuchen, N.J.
Luptak, Beverly M., Chicago, Ill.
Lurwick, Donald R., Romney, W. Va.
Luster, Gary D., Colorado Springs, Colo.
Luterman, David, Boston, Mass.
Lutz, Martha, Fulton, Mo.
Luxton, Mrs. Dianne K., Colton, Calif.
Lyas, Mrs. Esther B., Hampton, Va.
Lybrand, Mrs. Susan C., Dallas, Tex.
Lynch, Sister Jane Catherine, Buffalo, N.Y.
Lyon, Mrs. June M., Portland, Oreg.
Lyons, Mrs. Agnes K., Olyphant, Pa.
Lynam, Elizabeth, Bronx, N.Y.
Lynch, Mrs. Barbara, Waynesboro, Va.
Lynch, Daniel, Lafayette, Calif.
Lynch, Mrs. Irene M., Indianapolis, Ind.
Lynch, Linda L., Seattle, Wash.
Lynch, Mrs. Petronella K., New York, N.Y.
Lynne, Barbara E., Clarkfield, Minn.

Mc

McAdam, Colin, Faribault, Minn.
McAdams, Robert M., Wilson, N.C.
McAnally, Mrs. Patricia, Normal, Ill.
McAuliffe, Mrs. Barbara M., Bronxville, N.Y.
McAvoy, Sister Mary, Randolph, Mass.
McBeath, Mrs. Gertrude, Cleveland, Ohio
McBroom, Mrs. Jacqueline, Indianapolis, Ind.
McCabe, Ann Marie, West Hartford, Conn.
McCahill, Rev. Patrick, New York, N.Y.
McCain, Willie M., Rome, Ga.
McCandless, Mrs. Kathy, El Paso, Tex.
McCann, Mary Ellen, Washington, D.C.
McCarr, Mrs. Dorothy J., Salem, Oreg.
McCarthy, Sister Mary Louise, Randolph, Mass.
McCartt, Lee, Knoxville, Tenn.
McCarty, Mrs. Oleta, Sulphur, Okla.
McCaulley, Joanne E., Washington, D.C.
McChord, Mrs. Charlotte, Danville, Ky.
McChord, Winfield, Danville, Ky.
McClain, Mrs. Lenore, Knoxville, Tenn.
McClanahan, Mrs. Rosalie, Fulton, Mo.
McClary, Mrs. Dorothy, Fulton, Mo.
McClenathan, Sister Melrose Therese, Buffalo, N.Y.
McClure, Mrs. Ruth E., Pittsburgh, Pa.
McClure, Dr. William J., St. Augustine, Fla.
McCollom, Mrs. Florence, Great Falls, Mont.
McConalogue, Mrs. Agnes M., Bronx, N.Y.
McConnell, Mrs. Martha, Danville, Ky.
McConnell, William J., Hampton, Va.
McConvey, William, Gasport, N.Y.
McCool, Sister Regina, Randolph, Mass.
McCord, James J., Washington, D.C.
McCord, Mrs. Julianna E., Indianapolis, Ind.
McCord, Milla, Auburn, Ala.
McCord, Sam, Morganton, N.C.
McCormack, MaryAnn, Brooklyn, N.Y.
McCormick, Cathy, Blackfoot, Idaho
McCoy, Mary R., Riverside, Calif.
McCray, Mary M., Jacksonville, Ill.
McCrea, Mrs. Betty J., Baltimore, Md.
McCubbin, Mona K., Newington, Conn.
McCulloch, Mrs. Barbara J., Lincoln, Nebr.
McCullough, Mrs. Connie, Pittsburgh, Pa.
McCullough, Mrs. Evelyn, Knoxville, Tenn.
McCurry, S. Kay, Morganton, N.C.
McDaniel, Mrs. Mary Lou, Morganton, N.C.
McDede, Marilyn, Great Falls, Mont.
McDermott, Elizabeth F., Brooklyn, N.Y.
McDermott, Julie, Spartanburg, S.C.
McDermott, Maryann, Arlington, Va.
McDermott, Raymond, Omaha, Nebr.
McDonald, Mrs. Carol A., Frederick, Md.
McDonald, Carl, Salem, Oreg.
McDonald, Mrs. Dorothy H., Pittsburgh, Pa.
McDonald, Loretta Ann, Honolulu, Hawaii
McDonald, Mrs. Thelma, Omaha, Nebr.
McDowell, Floyd, Great Falls, Mont.
McDowell, Linda Anne, Albuquerque, N. Mex.
McEnaney, Susan, Stoughton, Mass.
McEvoy, Dorothy M., Riverside, Calif.
McFarland, Mrs. Janice, Tucson, Ariz.
McGarry, David A., Riverside, Calif.
McGill, Daniel, Austin, Tex.
McGill, David, Glastonbury, Conn.
McGill, Mrs. Dorothy, Vancouver, Wash.
McGill, Mrs. Gertie, Austin, Tex.
McGlamery, Mrs. Sara J., Tucson, Ariz.

McGrath, David P., San Francisco, Calif.
McGuinness, David J., Bowie, Md.
McIntosh, Mrs. Vina H., Atlanta, Ga.
McKay, Robin, Frankfort, Ill.
McKelvy, Mrs. Mary D., Oklahoma City, Okla.
McKemie, Melinda, Dallas, Tex.
McKenna, Edward T., Frederick, Md.
McKenney, Kathleen, Omaha, Nebr.
McKeon, James, Delavan, Wis.
McKenzie, Mrs. Carol, Knoxville, Tenn.
McKeon, Mrs. Ethel, Stayton, Oreg.
McKinley, Mrs. Helen, Seattle, Wash.
McKinney, Charlie, Rome, N.Y.
McKinney, Dr. Lucille, Troy, Mich.
McKinnon, Mrs. Margaret, Sulphur, Okla.
McLachlan, Karen, Holland, Mich.
McLane, Sister Agnes Teresa, Pittsburgh, Pa.
McLaughlin, Ellen, Milwaukee, Wis.
McLaughlin, Mrs. Hazel, Council Bluffs, Iowa
McLeland, Shirley, Omaha, Nebr.
McLelland, Mrs. Helen, Staunton, Va.
McLelland, Dr. Paul, Staunton, Va.
McLennan, Norman J., Salem, Oreg.
McLeondon, Gloria, Bladensburg, Md.
McMahon, Dale, Baton Rouge, La.
McManamy, Mrs. Maurine, Council Bluffs, Iowa
McMullin, Thomas J., Pittsburgh, Pa.
McNamara, Mrs. Isabelle, Vancouver, Wash.
McNeil, Debbie, Urbana, Ill.
McNulty, Margaret M., Wilmington, Del.
McPeak, Mrs. Elizabeth T., Monroeville, Pa.
McPhedran, Mrs. Marjorie, Edmonton, Alberta, Canada
McSwain, Mrs. Carol, Buffalo, N.Y.
McTiernan, Mrs. Mary Lou, Paramus, N.J.
McVeigh, Mrs. Joan, Lake Park, Fla.

M

Maas, Mathias, Vancouver, Wash.
MacAskill, Mrs. Diane, Bethesda, Md.
MacDonald, David, Concord, Calif.
MacDonald, Mrs. Geraldine S., Amherst, Nova Scotia, Canada
MacDonald, Irvin S., Amherst, Nova Scotia, Canada
MacDonald, Linda A., Amherst, Nova Scotia, Canada
MacDonald, Sister Margaret, Randolph, Mass.
MacFarlane, Mrs. Harriet, P., San Diego, Calif.
Mace, Emmie Lou, Morganton, N.C.
Machado, Madaline, Rochester, N.Y.
MacIntyre, Ann, West Newton, Mass.
Mack, Mrs. Elizabeth A., Baltimore, Md.
Mack, Janice, Charlottesville, Va.
MacKay, Constance, Ogden, Utah
Macky, Noel, Santa Fe, N. Mex.
MacNeil, Linda, Redondo Beach, Calif.
Maddox, Mrs. Helen B., Taylors, S.C.
Maddox, Mildred, Olathe, Kans.
Mader, Judith C., Indianapolis, Ind.
Madison, Mrs. Jeannette A., Frederick, Md.
Madsen, Willard J., Riverdale, Md.
Maedel, Judy, Ypsilanti, Mich.
Maetello, Arthur, Brooklyn, N.Y.
Magill, Medford, Baton Rouge, La.
Magness, James, Rome, N.Y.
Magno, Carmen P., St. Augustine, Fla.
Mahaley, Mrs. Anne K., Wilson, N.C.
Mahla, Sister Jeremy, Urbana, Ill.
Mahlum, Nancy, Great Falls, Mont.
Mahoney, Donald B., Washington, D.C.
Maier, Mrs. Betty J., Great Bend, Kans.
Maison, Mrs. Elizabeth J., Beverly Hills, Calif.
Malin, Dr. Jerald A., Riderwood, Md.
Mallinckrodt, Mrs. Betty, Fulton, Mo.
Malmberg, Mrs. Geraldine J., Pittsburgh, Pa.
Malone, Sister Mildred, Randolph, Mass.
Mallow, Mrs. Wilda, Staunton, Va.
Malphurs, Mrs. Jane D., Jackson, Miss.
Malzkuhn, Eric, Jr., San Mateo, Calif.
Manansala, Mrs. Lourdes S., Baltimore, Md.
Mincini, Mary, Buffalo, N.Y.
Mandery, Linda, Rochester, N.Y.
Mangan, James J., Las Cruces, N. Mex.
Mangan, Dr. Kenneth R., Jacksonville, Ill.
Manik, Patricia, Warren, Mich.
Manley, Mrs. Rachel M., Houston, Tex.
Mann, Jacqueline, Landover, Md.
Mann, Mrs. Nancey W., Norfolk, Va.
Mann, Richard M., Tucson, Ariz.
Mann, Susan B., Dallas, Tex.
Mannen, Grace, Detroit, Mich.
Manning, Mrs. Camille, Buffalo, N.Y.
Mannion, Sister Philomena, Pittsburgh, Pa.
Manshel, Mrs. Hannah, New Rochelle, N.Y.
Mantle, John Ervin, Salt Lake City, Utah
Marcelle, Mrs. Mildred K., Baton Rouge, La.
Marcellino, Michael, Larchmont, N.Y.
Margaret, Sister, Chicago, Ill.
Margulies, Susan K., Washington, D.C.
Marhefka, Frank R., Lake Lynn, Pa.
Marie, Sister Doris, Lake Ronkonkoma, N.Y.
Mary, Sister Loyola, Lake Ronkonkoma, N.Y.

Marino, Mrs. Rosemarie, Brooklyn, N.Y.
Marjorie, Sister Mary, Randolph, Mass.
Markey, Francis B., Brattleboro, Vt.
Markiewicz, Betty A., Menlo Park, Calif.
Markoff, Mrs. Maxine, New York, N.Y.
Marks, Connie R., Amherst, Nova Scotia, Canada
Marks, Mrs. Mary Jane, Austin, Tex.
Marland, Emily J., Washington, D.C.
Marney, Susan, Redondo Beach, Calif.
Marra, William, Olathe, Kans.
Marriner, Rebecca, Washington, Pa.
Marsh, Charles E., Jr., Olathe, Kans.
Marsh, Mrs. Kathleen, Olathe, Kans.
Marshall, Alfred, Danville, Ky.
Marshall, Erwin, Lafayette, Calif.
Marshall, Mrs. Margaret, Danville, Ky.
Marshall, Marvin J., Carmel, Ind.
Marshall, Mrs. Mary H., Hattiesburg, Miss.
Marshall, Philip, Austin, Tex.
Marshall, Mrs. Teresa, Carmel, Ind.
Marshall, Dr. William J. A., Seattle, Wash.
Marshall, Zoe, Jacksonville, Ill.
Marston, Karen D., Mill Neck, N.Y.
Martens, Mrs. Katherine K., Bronx, N.Y.
Martin, Dolores, Newark, N.J.
Martin, Elnora, Lyerly, Ga.
Martin, Frances, Morganton, N.C.
Martin, Sister Mary, Randolph, Mass.
Martin, Mrs. Merle R., Morganton, N.C.
Martin, Pamela, Urbana, Ill.
Martin, Mrs. Sandra, Orlando, Fla.
Martin, Mrs. Vallie J., Morganton, N.C.
Martina, Russell, Buffalo, N.Y.
Martins, Gary H., Campbellvile, Ont., Canada
Martucci, Cecilia, Los Angeles, Calif.
Martyka, Emilia, Detroit, Mich.
Marzolf, Michael, Staunton, Va.
Maselli, Miss A. A., Monrovia, Calif.
Mason, Henry, Brooklyn, N.Y.
Mason, Virgil J., Columbia, Md.
Mason, Warren M., Monmouth, Oreg.
Massey, Mrs. James F., Wilson, N.C.
Massey, Leslie J., Indianapolis, Ind.
Massey, Wayland, Council Bluffs, Iowa
Massingill, Nan, Lufkin, Tex.
Matheny, Lawrence, Forest City, N.C.
Mathews, Mrs. Jack, Chicago, Ill.
Mathews, John P., Faribault, Minn.
Mathewson, Mrs. Penelope, Alhambra, Calif.
Mathis, Mrs. Amy, Knoxville, Tenn.
Mathis, Steve, Baltimore, Md.
Matkin, Dr. Noel D., Evanston, Ill.
Matlock, Mrs. Ethlyn, Little Rock, Ark.
Matocha, Mrs. Valerie, Green Bay, Wis.
Matsui, Mrs. Christine, Eugene, Oreg.
Matteson, Carol, Francestown, N.H.
Matthews, Gail, Great Falls, Mont.
Mattingly, Susan, Baltimore, Md.
Matujec, Mrs. Mary Ann, Salem, Oreg.
Mau, Mrs. Carol, Tempe, Ariz.
Maugeri, Grace, West Hartford, Conn.
Maust, Dexter C., Dallas, Oreg.
Maxey, Tom, Rochester, N.Y.
Maxwell, Mrs. Betsy, Alexander, Ark.
Maxwell, Joseph, Yarmouth, Maine
Maxwell, Mrs. Nelda, Morganton, N.C.
May, Barbara, Danville, Ky.
May, Mrs. Carol C., Riverside, Calif.
May, Mrs. Judith, Tucson, Ariz.
May, Karl H., Tucson, Ariz.
May, Mrs. Nadene, Danville, Ky.
May, Patricia Diane, Tallahassee, Fla.
Mayder, Carol, Detroit, Mich.
Mayer, Sarah, Gardena, Calif.
Mayes, Mrs. Julia, Flint, Mich.
Mayes, Dr. Thomas A., Northridge, Calif.
Mayfield, Mr. Rohel E., Wilson, N.C.
Mayo, Mrs. Margaret W., Baltimore, Md.
Maynard, Hollis B., Louisville, Ky.
Mays, Mrs. Mary Alice, Casper, Wyo.
Mazick, Myra J., Pittsburgh, Pa.
Mazanti, Mrs. Sharon, Little Rock, Ark.
Mazotta, Mary G., Piscataway, N.J.
McDonald, Mrs. Jane H., Houston, Tex.
Meacham, Mrs. Gail, Marietta, Ga.
Meacham, Sharon, Memphis, Tenn.
Meador, Kelly, Austin, Tex.
Means, Mrs. Karen, Eaton, Colo.
Means, Lily F., Long Beach, Calif.
Mears, Edwin G., Salt Lake City, Utah
Measels, Mrs. Evelyn, Santa Fe, N. Mex.
Mediran, Virginia, Olathe, Kans.
Medlock, Mrs. Hilda, North Little Rock, Ark.
Meek, Mrs. Earle B., Frederick, Md.
Meek, Joanne, Riverside, Calif.
Meeks, James E., Bloomington, Calif.
Mehl, Albert E., Morganton, N.C.
Meier, Mrs. June, Great Falls, Mont.
Meis, Mrs. Edna Noe, Albuquerque, N. Mex.
Meisegeier, Richard M., New Carrollton, Md.
Meisel, Adrienne, Chicago, Ill.
Meisser, Mrs. Virginia, Milwaukee, Wis.
Melby, Mrs. Carol, Devils Lake, N. Dak.
Melnick, Mrs. Rose R., Bronx, N.Y.
Melton, Sheldon, Staunton, Va.
Menkis, Paul, Gaithersburg, Md.
Menson, Stanley, Riverside, Calif.
Mercaldo, David, Rochester, N.Y.
Mercurio, Mary Ann, Newark, N.J.
Meredith, Linda, San Antonio, Tex.
Merklin, Arthur, Fulton, Mo.

Merlino, Robert, Vancouver, Wash.
Merriam, Jessie D., Lakewood, Ohio
Merrill, Dr. Edward C., Jr., Washington, D.C.
Messmer, Mary Lou, Columbus, Ohio
Metcalfe, Mrs. Mary C., Gastonia, N.C.
Meyer, Mrs. Catherine, Elmhurst, Ill.
Meyer, Hannah, Oakland, Calif.
Meyer, Mrs. Nancy E., Sauk Rapids, Minn.
Meyers, Sister Edna Marie, Pittsburgh, Pa.
Micallef, Maria, Winnipeg 9, Manitoba, Canada
Michael, Joan H., Oakland, Calif.
Michael, Sister Marie, Randolph, Mass.
Michaelson, Judy, Seattle, Wash.
Michener, Martha, Kingston, Tenn.
Middleton, Bernice, Ceres, Calif.
Midkiff, Mrs. Jane H., Lexington, Ky.
Mierau, Patricia, Royal Oak, Mich.
Mierendorf, Mrs. Gerarda Ann, St. Clair Shores, Mich.
Miescher, Mrs. Frances R., Tucson, Ariz.
Mikos, Kenneth, Berkeley, Calif.
Milburn, Dr. Wanda O., Ann Arbor, Mich.
Miles, Mrs. Brenda, Wilson, N.C.
Miles, Lucy, Waynesboro, Va.
Milesky, Samuel D., Madison, Wis.
Milford, John, Tucson, Ariz.
Milich, Fredda, Flushing, N.Y.
Miller, Mrs. Albert, Bay Village, Ohio
Miller, Carolyn, Ypsilanti, Mich.
Miller, Charles J., Columbus, Ohio
Miller, Delmas F., Morganton, N.C.
Miller, Mrs. Harriet, Simi Valley, Calif.
Miller, Dr. June, Kansas City, Kans.
Miller, Kenneth, Vancouver, Wash.
Miller, Mrs. Loretta, Sioux Falls, S. Dak.
Miller, Mrs. Lucille V., Northridge, Calif.
Miller, Dr. M. H., New York, N.Y.
Miller, Sister Marie Corona, Pittsburgh, Pa.
Miller, Marlene, Bayville, N.Y.
Miller, Mary A., Oakhurst, N.J.
Miller, Sister MaryLou, North Plainfield, N.J.
Miller, Richard, Ventura, Calif.
Miller, Mrs. Wanda, Oakland, Calif.
Milligan, Mrs. Bertha, White Plains, N.Y.
Milligan, Kevin, Buffalo, N.Y.
Milligan, Tim, Hot Springs, Ark.
Milligan, William, White Plains, N.Y.
Mills, Dr. Jack, Annapolis, Md.
Mills, William R., Hayward, Calif.
Millward, Janice C., Denver, Colo.
Ming, Mrs. Kay, Austin, Tex.
Ming, Prentis, Austin, Tex.
Minger, Pamela, Cheverly, Md.
Minihan, Helen R., Stony Brook, N.Y.
Minkel, Mrs. Sarah L., Newton, Pa.
Minnick, Mrs. Marie, Mill Neck, N.Y.
Minnick, Peter, Mill Neck, N.Y.
Minogue, Kathleen F., Chicago, Ill.
Minor, Mrs. Claryce J., Baton Rouge, La.
Minor, Joseph K., Wilson, N.C.
Minor, Mrs. Mary, Briarcliff Manor, N.Y.
Minton, Nita M., Riverside, Calif.
Miracle, Mrs. Janet, Olathe, Kans.
Miranda, Joe, Vancouver 8, B.C., Canada
Mirus, Edward, Delavan, Wis.
Missimer, Mrs. Lou N., Elizabethton, Tenn.
Mitchell, Mrs. Betty L., Morganton, N.C.
Mitchell, Mrs. Carolyn A., Centre, Ala.
Mitchell, Dianne N., Rochester, N.Y.
Mitchell, Mrs. Dorothy B., Morganton, N.C.
Mitchell, Mrs. Peggy, Austin, Tex.
Mitchell, Ronald, Faribault, Minn.
Mitchell, Stephen M., Centre, Ala.
Mnich, Wayne C., Talladega, Ala.
Moak, Solon E., Jackson, Miss.
Mobley, Mrs. Glenda, Trenton, N.J.
Moehring, Mrs. Gertrude V., Houston, Tex.
Moen, Mrs. Karen, Sioux Falls, S. Dak.
Moenigmann, Clarice, St. Louis, Mo.
Moffit, Norma, Roy, Utah
Moffitt, Mrs. Mary, Portland, Oreg.
Mog, Hubertine, Los Angeles, Calif.
Mokate, R. Lorene, Urbana, Ill.
Moline, Grace, Clarendon Hills, Ill.
Mollou, John F., Sr., Pontiac, Mich.
Molocavage, Mary C., Tucson, Ariz.
Moncrief, Mrs. Clara, Talladega, Ala.
Mondada, Ernest J., Silver Spring, Md.
Monforton, Jan, Vancouver, Wash.
Monoghan, Bilbo, Knoxville, Tenn.
Monsees, Dr. Edna K., Washington, D.C.
Montgomery, Mrs. Callie, Rome, Ga.
Montgomery, Mrs. Camille, Memphis, Tenn.
Moon, Irma, Santa Fe, N. Mex.
Moon, Mary Alice, Indianapolis, Ind.
Mooneyham, Mrs. Jeannine, Covina, Calif.
Moore, Cheryl, St. Clair Shores, Mich.
Moore, Eileen B., Mt. Vernon, N.Y.
Moore, Larry, Jacksonville, Ill.
Moore, Leander, Knoxville, Tenn.
Moore, Lucy, Trenton, N.J.
Moore, Marguerite, Colton, Calif.
Moore, Marilyn, Dallas, Tex.
Moore, Mrs. Marjorie, Ft. Worth, Tex.
Moore, Mrs. Mary Evelyn, Tallahassee, Fla.
Moore, Sister Mary John, Pittsburgh, Pa.
Moore, Michael R., Jacksonville, Ill.
Moore, Mrs. Nana L., Mounds, Okla.

Moore, Mrs. Ruth, Fulton, Mo.
Moore, Mrs. Sue, Indianapolis, Ind.
Moore, Mrs. Susan E., Pittsburgh, Pa.
Moore, Sister Theresa, Buffalo, N.Y.
Moore, Winchell, Peterboro, N.H.
Moores, Dr. Donald F., St. Paul, Minn.
Moran, Josephine M., Bronx, N.Y.
Moran, Mrs. Odean, Davidson, Ala.
Morgan, Mrs. Martha Kay S., Richardson, Tex.
Morgan, Susan B., North Ogden, Utah
Morin, Mrs. Lois, Douglas Hill, Maine
Morita, Haruo, Vancouver, Wash.
Morris, Judith A., Wilson, N.C.
Morris, Mrs. Margaret B., Long Beach, Calif.
Morris, Mrs. Mildred L., Spartanburg, S.C.
Morrison, James D., London, Ky.
Morton, Pauline J., South Bend, Ind.
Moseley, Mrs. Lola B., Louisville, Ky.
Mosher, Mrs. Nancy A., Holt, Mich.
Mosier, Wilbur, Little Rock, Ark.
Moss, Mrs. Catherine J., Houston, Tex.
Moss, Mrs. Janet, Jacksonville, Ill.
Mossel, Max, Fulton, Mo.
Mothersell, Lawrence, Geneseo, N.Y.
Motley, Gene R., St. Augustine, Fla.
Motley, Jeanne R., Denver, Colo.
Motley, Mrs. Ruth G., St. Augustine, Fla.
Motley, Mrs. Susan, Fulton, Mo.
Mott, Clyde, Seattle, Wash.
Moulton, Robert, Ogden, Utah
Moursund, Mrs. Geraldine, Austin, Tex.
Mowl, Harold M., Jr., Pittsburgh, Pa.
Moylan, Patti, Shawnee Mission, Kans.
Mrizek, Shirley, Citrus Heights, Calif.
Mucciolo, John L., Hastings-on-Hudson, N.Y.
Mucciolo, Lillian C., Hastings-on-Hudson, N.Y.
Much, James B., Corbin City, N.J.
Mudgett, David, Jacksonville, Ill.
Mudgett, Mrs. Grace L., Jacksonville, Ill.
Muegge, Mrs. Jane, Austin, Tex.
Mueller, Eleanor, Faribault, Minn.
Mueller, Ruth, Spring Hill, Kans.
Mull, Mrs. Betty S., Morganton, N.C.
Mull, Mabel M., Drexel, N.C
Mullane, Mary, Rockford, Ill.
Mullenax, Mrs. Marian, Olathe, Kans.
Muller, Keith D., Westminster, Md.
Mullins, Richard, Great Falls, Mont.
Munger, Mrs. Evelyn, Kansas City, Kans.
Munnis, Mrs. Alice, Lincoln, Nebr.
Munroe, Mrs. Gail, Tucson, Ariz.
Murdock, Mrs. Margaret, Buffalo, N.Y.
Muriello, JoAnne, Croton-on-Hudson, N.Y.
Murolo, Marco, Tucson, Ariz.
Murphy, Mrs. Billie, Little Rock, Ark.
Murphy, Fred R., Olathe, Kans.
Murphy, Dr. Harry J., Inglewood, Calif.
Murphy, Mrs. Joyce, Sulphur, Okla.
Murphy, Mrs. Joyce E., Vancouver, Wash.
Murphy, Rev. Lawrence C., Milwaukee, Wis.
Murphy, Lee C., Buffalo, N.Y.
Murphy, Michael, Jacksonville, Ark.
Murphy, Rosemary, Bronx, N.Y.
Murray, John, Austin, Tex.
Murray, Mildred F., St. Augustine, Fla.
Murray, Mrs. Peggy, Vidalia, La.
Murray, Mrs. Winona L., Palos Verdes Peninsula, Calif.
Murrel, Mrs. Margaret, Little Rock, Ark.
Muse, Helen, Cave Spring, Ga.
Musemeche, Mrs. Genevieve, Baton Rouge, La.
Musmanno, Madeline F., Riverside, Calif.
Myers, Mrs. Thelma, Baton Rouge, La.
Myhre, Mrs. Doris P., Milwaukee, Wis.
Myklebust, Joseph, Council Bluffs, Iowa
Myklebust, Dr. A. S., Sioux Falls, S. Dak.

N

Nace, Dr. John G., Newark, Del.
Nagamine, Mrs. Dorothy, San Jose, Calif.
Nagel, Dr. Robert F., New Haven, Conn.
Nagy, Edward J., Pittsburgh, Pa.
Nagy, Mrs. Sally J., Pittsburgh, Pa.
Nathanson, Yale S., Philadelphia, Pa.
Naud, Jean-Guy, Rochester, N.Y.
Neal, Ermine, Cave Spring, Ga.
Nealy, John, Faribault, Minn.
Neasham, Patricia A., Colorado Springs, Colo.
Needham, Richard M., Lancaster, Ohio
Neff, Tisa, Durango, Colo.
Neidetcher, Mrs. Rebecca, Whitesboro, N.Y.
Neleigh, Janice L., Pittsburgh, Pa.
Nelsen, Patsy A., Devils Lake, N. Dak.
Nelson, Mrs. C. Arlene, Jacksonville, Ill.
Nelson, Mrs. Barbara, Libertyville, Ill.
Nelson, Mrs. Bonita, Salem, Oreg.
Nelson, Jayne V., Minneapolis, Minn.
Nelson, Mrs. Kathleen H., Houston, Tex.
Nelson, Linda C., Houston, Tex.
Nelson, Mrs. Louise B., Raleigh, N.C.
Nelson, Mrs. Lynn, Charlottesville, Va.
Nelson, Martin R., White Plains, N.Y.
Nelson, Norman, Staunton, Va.
Nelson, Mrs. Patricia, Gooding, Idaho
Nelson, Robert, Morgan, Utah
Nelson, Mrs. Ruth E., Monmouth, Oreg.
Nesemeier, Gregg R., Washington, D.C.
Neubacher, Marjorie, Drayton Plains, Mich.

Neumann, Donald, Tucson, Ariz.
Neumann, Mrs. Kit, Austin, Tex.
Newberg, Mrs. Connie, Riverside, Calif.
Newby, Bernice D., New York, N.Y.
Newby, J. L., Cedar Rapids, Iowa
Newkirk, June, Tucson, Ariz.
Newman, Mrs. Betty, Riverside, Calif.
Newman, Lawrence, Riverside, Calif.
Nichols, Mrs. Katherine M., Elmwood, Conn.
Nicolai, Richard D., Indianapolis, Ind.
Nicholas, Mrs. Anne, Austin, Tex.
Nichols, Mrs. Clare, Delray Beach, Fla.
Nichols, Jenny, Portland, Oreg.
Nicholson, Mrs. Caroline, Omaha, Nebr.
Nicholson, Mrs. Evelyn, Knoxville, Tenn.
Niedzialek, Edward, Rochester, N.Y.
Nielsen, Andrew L., Greeley, Colo.
Nielsen, J. Boyd, Ogden, Utah
Nies, Barbara Ann, New York, N.Y.
Nilson, Mrs. Mabel W., Worthington, Ohio
Nolan, Jenny, Ypsilanti, Mich.
Noland, Linda A., Birmingham, Ala.
Noll, Phyllis J., Washington, D.C.
Nomeland, Emery T., Romney, W. Va.
Nomeland, Ronald E., Liverpool, N.Y.
Nord, J. Meredith, Colorado Springs, Colo.
Norman, Mrs. Susan, Fayetteville, Ark.
Nordwall, Carl N., Irving, Tex.
Norris, Beryl, Philadelphia, Pa.
Norris, Nathan P., Tucson, Ariz.
North, Sister Rose Anita, Buffalo, N.Y.
Northcott, Mrs. Winifred Nies, Minneapolis, Minn.
Northrup, Nancy, St. Augustine, Fla.
Norton, Mrs. Dorothy L., Orosi, Calif.
Norton, Mrs. Sylvia, New York, N.Y.
Nortz, Naomi, Vancouver, Wash.
Norwood, Joyce, Norfolk, Va.
Norwood, Malcolm J., New Carrollton, Md.
Nourse, Anita, Amherst, Mass.
Noyes, Dr. Marrianne, Jaffrey, N.H.
Nugent, Nicholas, Rochester, N.Y.
Nunez, Margaret, San Diego, Calif.
Nunnelley, Mrs. Jeannette, Rome, N.Y.
Nunnery, Joseph, Jackson, Miss.
Nutt, Mrs. Emogene, Little Rock, Ark.
Nwamkpa, Theophilus, Portales, N. Mex.
Nycum, Mrs. Mattie, Austin, Tex.
Nye, William, Cumberland Ctr., Maine

O

Oberman, Nancy C., Denver, Colo.
O'Brien, Elizabeth H., Rochester, N.Y.
O'Brien, Rt. Rev. Michael D., Oakland, Calif.
O'Brien, Philip C., Silver Springs, N.Y.
O'Connor, M. Lorraine, Saskatoon, Sask., Canada
O'Connor, Patricia A., Pittsburgh, Pa.
O'Donnell, Helen, Scranton, Pa.
Odzer, Olivia, Scranton, Pa.
Oermann, Rev. Ervin, Milledgeville, Ga.
Ogan, Mrs. Edith, Sulphur, Okla.
Ogden, Sister Angelene, Chicago, Ill.
Ogletree, Mrs. Barbara L., Morganton, N.C.
O'Grady, Mary C., Jamaica, N.Y.
Ohlinger, Betty P., Colton, Calif.
Ohly, Lee Ann, Delavan, Wis.
Oja, Mrs. Linda, Peterboro, N.H.
Oja, Mrs. Marcia, St. Augustine, Fla.
Oja, Norman, St. Augustine, Fla.
Olander, Mrs. Mary E., Gooding, Idaho
Olanoff, Mrs. Pearl B., Philadelphia, Pa.
Olanoff, Mrs. Rose S., Philadelphia, Pa.
Olesinski, Mrs. Natalie, Brooklyn, N.Y.
Oliver, John, St. Augustine, Fla.
Olmstead, M. Ann, Rocky Hill, Conn.
Olsen, Gary W., Indianapolis, Ind.
Olsen, Miss Jean A., Gaastra, Mich.
Olson, Carolyn M., Los Angeles, Calif.
Olson, Mrs. Diane, Riverside, Calif.
Olson, Harvey, Omaha, Nebr.
Olson, Jack, Bozeman, Mont.
Olson, John R., Indianapolis, Ind.
Olson, LeAnn, Omaha, Nebr.
Olson, M. Christine, St. Augustine, Fla.
Olson, Marlys C., Salem, Oreg.
Olson, Mrs. Marny W., Indianapolis, Ind.
Olson, Mrs. Mary, Columbus, Ohio
Olson, Raymond C., Sioux Falls, S. Dak.
O'Malley, Mrs. Ann R., Danville, Ky.
O'Meara, Kathleen, Van Nuys, Calif.
O'Neill, Florence, Rome, N.Y.
O'Neill, Marlyn, Urbana, Ill.
Opperman, John J., Cleveland Heights, Ohio
Opsahl, Mrs. Harriet, Riverside, Calif.
Oquisanti, Joseph L., Glastonbury, Conn.
Orcutt, Gene L., Luquillo, P.R.
Orenbaum, Ruth, Austin, Tex.
Orlando, Sandra, Williamsville, N.Y.
Orman, Mrs. Doris B., Jacksonville, Fla.
Orr, Agnes, Ogden, Utah
Ortiz, Guadalupita, Colorado Springs, Colo.
Ortiz, Jose Dennis, Holt, Mich.
Osborn, Nona Linn, Waysata, Minn.
Osborn, Mrs. Dorisanne, W., Pittsburgh, Pa.
Osborn, Mrs. Lucile B., Cleveland, Ohio
Osborne, Howard, Council Bluffs, Iowa
Osborne, Karen, E. Norritson, Pa.
Osborne, Mrs. Margaret, Council Bluffs, Iowa
Osborne, Rev. Stanley, Danville, Ky.
O'Shea, Mrs. Joan, New York, N.Y.
O'Shea, John T., Rochester, N.Y.
Ottinger, Paula, Hagerstown, Md.
Otto, Anne, Napa, Calif.

Otto, Mrs. Donna, Austin, Tex.
Overlander, Mrs. Caroline, Rochester, N.Y.
Overman, Mrs. Anne, Willing, Portland, Oreg.
Owen, Charles, III, Columbus, Ohio
Owens, Charles R., Wilson, N.C.
Owens, Mrs. Joy B., Wilson, N.C.
Owens, Michael E., Landover, Md.
Owens, Mrs. Ruth, Austin, Tex.
Owens, Mrs. Vera Y., Cedartown, Ga.

P

Paarlberg, Mrs. Betsy, Normal, Ill.
Pace, Donald H., Wilson, N.C.
Pacheco, Mrs. Dorothy, Greenfield, N.H.
Padden, Agnes M., Hyattsville, Md.
Padden, Donald A., Hyattsville, Md.
Paddock, Douglas, Briarcliff Manor, N.Y.
Page, Mrs. Helen A., New York, N.Y.
Pahle, William F., Highland Park, Ill.
Painter, Carroll C., Spartanburg, S.C.
Painter, Aubrey, Staunton, Va.
Painton, Mrs. Ann, Austin, Tex.
Pakula, Isaac J., Romney, W. Va.
Palau, Alicia D., Chula Vista, Calif.
Palmer, Carl, Rochester, N.Y.
Palmquist, Warren R., Simi Valley, Calif.
Palmer, Howard O., Jr., Hartford, Conn.
Panara, Robert F., Henrietta, N.Y.
Panara, Shirley, Henrietta, N.Y.
Pancake, Anne E., Romney, W. Va.
Pancake, Virginia L., Romney, W. Va.
Papalia, Anthony, Vancouver, Wash.
Park, Charlotte, Dallas, Tex.
Park, Mrs. Patricia, Northridge, Calif.
Parke, Mrs. Ruth V., Chicago, Ill.
Parker, Mrs. Dovie, Sulphur, Okla.
Parker, Samuel, Walkersville, Md.
Parkin, Mrs. Orpha, Carmel, Ind.
Parks, Mrs. Fern, Olathe, Kans.
Parks, Mrs. Fern, Little Rock, Ark.
Parks, Lloyd R., Olathe, Kans.
Parks, Roy G., Little Rock, Ark.
Parrish, Horace, Cave Spring, Ga.
Parrish, Rhonda, Rochester, N.Y.
Parry, Judiruth, Surrey, B.C., Canada
Pascaretta, Sister Marie Gerard, Pittsburgh, Pa.
Pashky, Mrs. Linda, Sylmar, Calif.
Passo, Mrs. Sylvia B., Indianapolis, Ind.
Pate, Gwendolyn L., Washington, D.C.
Patrick, Lilly-Mary, Dunmore, Pa.
Patrie, Stanley, Sunderland, Mass.
Patten, Frances M., Corona Del Mar, Calif.
Patterson, Dorothy, Olathe, Kans.
Patterson, Mrs. Lola W., Hampton, Va.
Patterson, Lorraine, Levittown, Pa.
Patterson, Dr. Ramelle F., Louisville, Ky.
Patton, Carolyn, Salinas, Calif.
Patton, Charles, Venice, Calif.
Patton, Mrs. Mary C., Morganton, N.C.
Patton, Roy K., Talladega, Ala.
Paul, Jeanne, Riverside, Calif.
Paul, James B., Cheswick, Pa.
Pauley, Susan, Normal, Ill.
Paullin, John H., Riverside, Calif.
Paxson, Grace E., Riverside, Calif.
Paxton, Fannie, Staunton, Va.
Payne, John A., Jr., Tallahassee, Fla.
Payne, Mrs. Marsha E., Middletown, Md.
Payne, Mrs. Nancy, Salt Lake City, Utah
Payne, Mrs. Patsy Jo, Santa Fe, N. Mex.
Payne, Mrs. Shirley, Fulton, Mo.
Peacock, Leonard, Delavan, Wis.
Pearce, Mrs. Mary French, Tucson, Ariz.
Pearce, Virginia L., Wilson, N.C.
Pearson, Mrs. Connie, St. Augustine, Fla.
Pearson, Edward A., Hampton, Va.
Pearson, John, Great Falls, Mont.
Pease, Carolyn, Garfield, N.J.
Peavy, Mrs. Doris C., Houston, Tex.
Peck, Billy J., Salem, Oreg.
Peksa, Paul Jr., Ellicott City, Md.
Pellicci, Lucio, White Plains, N.Y.
Pelloth, Lorraine, Buffalo, N.Y.
Pelser, Anna K., West Hartford, Conn.
Pemberton, Mrs. Cecilia, Indianapolis, Ind.
Pendell, Lucille H., Alexandria, Va.
Penland, Mrs. Nan, Spartanburg, S.C.
Pensis, Joseph H., Kalamazoo, Mich.
Penny, Mrs. Penelope S., Cave Spring, Ga.
Pepe, Joseph, Riverside, Calif.
Perdue, Mrs. Catherine, Cave Spring, Ga.
Perdue, Eugene, Cave Spring, Ga.
Perez, Mrs Carrie S., San Antonio, Tex.
Perkins, Roger S., Knoxville, Tenn.
Perlmutter, Miles B., Los Angeles, Calif.
Perrin, Mary, Baton Rouge, La.
Perry, Kristine, Indianapolis, Ind.
Perry, Robert, Little Rock, Ark.
Persinger, John, Newark, Del.
Peters, Mrs. Bryanne, Waupaca, Wis.
Peters, Charles, Salt Lake City, Utah
Peters, Mrs. Vernice, Riverside, Calif.
Peters, William, Riverside, Calif.
Petersen, Mrs. Frances, Newark, Del.
Petersen, Larry, Mt. Lake Terrace, Wash.
Peterson, Mrs. Barbara R., Rock Island, Ill.
Peterson, David R., Santa Ana, Calif.

Peterson, Gerald A., Orange, Calif.
Peterson, Mrs. Inez, Council Bluffs, Iowa
Peterson, Mrs. Marilyn K., Little Rock, Ark.
Peterson, Paul C., Rochester, N.Y.
Peterson, Mrs. Rosamond, Webster, N.Y.
Peterson, Mrs. Shirley, Hagerman, Idaho
Petrone, Angela, Devils Lake, N. Dak.
Pettie, Mrs. Nancy, Vancouver, Wash.
Pettingill, Don G., Seabrook, Md.
Petts, Mrs. Carol, Peterboro, N.H.
Petty, Mrs. Phyllis T., Spartanburg, S.C.
Petty, Mrs. Ruth, Spartanburg, S.C.
Petrovich, Mrs. Karen, Louisville, Ky.
Pezel, Mrs. Bonnie, Oakland, Calif.
Pfau, Dr. Glenn S., Washington, D.C.
Pfnister, Naomi L., Salem, Oreg.
Pharr, Marian, Austin, Tex.
Phelan, Margaret, Austin, Tex.
Phelps, A. Donald, Frederick, Md.
Phelps, Mrs. Lenora A., Baltimore, Md.
Phillips, Mrs. Annie L., Morganton, N.C.
Phillips, Benjamin, Baton Rouge, La.
Phillips, Harvey W., Wilson, N.C.
Phillips, Mrs. Marie T., Pittsburgh, Pa.
Phillips, Mary Ann, Buffalo, N.Y.
Phillips, Matthew, Baton Rouge, La.
Phillips, Richard A., Redding, Calif.
Phillips, Richard M., Washington, D.C.
Phillips, Dr. William D., Memphis, Tenn.
Piccolino, Joseph R., Williamville, N.Y.
Pickering, Rev. Roger A., Philadelphia, Pa.
Picou, Kateri A., Riverside, Calif.
Pidcock, Barry, Jacksonville, Ill.
Pierce, Catherine, Houston, Tex.
Pierce, Cheryl, Omaha, Nebr.
Pierce, Roy L., Metairie, La.
Piesiak, Mrs. Mary M., Trenton, N.J.
Pierson, Mrs. Kay H., Baltimore, Md.
Pillsbury, Mrs. Janey S., San Antonio, Tex.
Pilsums, Leonids, Staunton, Va.
Pimentel, David, Tucson, Ariz.
Pino, Dr. Jacob S., Muncie, Ind.
Pirtle, Mrs. Beth, Columbus, Ohio
Pitts, Mrs. Jodell, Lancaster, Tex.
Pitzer, Anita, Santa Rosa, Calif.
Plaster, Mrs. Marguerite C., Morganton, N.C.
Plausky, Sister Jean, Randolph, Mass.
Plummer, Donald M., Winnipeg 29, Man., Canada
Plummer, Richard L., Perris, Calif.
Plyler, Roy E., Salem, Oreg.
Podsiadlo, Frank, Cheektowaga, N.Y.
Poirier, Mrs. Marlene G., Fountain Valley, Calif.
Pokorny, Daniel H., Beltsville, Md.
Poling, Carmen S., Riverside, Calif.
Pollard, Burhett, Morganton, N.C.
Pollard, Kenneth H., Macon, Ga.
Pollard, Mary, Little Rock, Ark.
Polley, Janet S., Scranton, Pa.
Pongan, Mrs. Ruth C., Peterboro, N.H.
Poole, Mrs. Norma C., Faribault, Minn.
Pope, Neil, St. Augustine, Fla.
Porter, Barbara Lynn, Norman, Okla.
Porter, Dean A., Olathe, Kans.
Porter, Fred, Roebuck, S.C.
Porter, Mrs. Gerald, Silver Creek, N.Y.
Porter, Joe, Jackson, Miss.
Porter, Mrs. Lois S., Canaan, N.Y.
Porter, Shirley Lee, APO New York, N.Y.
Porter, Mrs. Susan, Little Rock, Ark.
Porter, Thomas A., Olathe, Kans.
Portnoy, Mrs. Evelyn, Boca Raton, Fla.
Posey, Mrs. Annie, Spartanburg, S.C.
Posey, Edward, Del Valle, Tex.
Poth, E. Beverly, Smyrna, Ga.
Poulos, Dr. Thomas H., Grand Blanc, Mich.
Powell, Cheryl, Milwaukee, Wis.
Powell, Frank W., Dallas, Tex.
Powell, Miss Michaele D., Alameda, Calif.
Powers, Sister Ann, Brooklyn, N.Y.
Powers, Gerald Wm., Greeley, Colo.
Powers, Mrs. Wilann S., Lindale, Ga.
Prall, Josephine, Spartanburg, S.C.
Pratt, Geraldine, Tucson, Ariz.
Preece, Karen, Ogden, Utah
Preng, Mrs. Frances M., Chicago, Ill.
Presher, Mrs. Mildred, Little Rock, Ark.
Preston, Mrs. Katherine S., Decatur, Ga.
Pribbenow, Sophia F., Sherman, Tex.
Price, Robert O., Las Cruces, N. Mex.
Prichard, Doris, St. Augustine, Fla.
Prickett, Hugh T., Jackson, Miss.
Prickett, Luther B., Pittsburgh, Pa.
Priddy, Dorothy M., Houston, Tex.
Pridgen, Gay, San Antonio, Tex.
Prince, Mrs. Jean, Oakland, Calif.
Prince, Robert J., Concord, Calif.
Proctor, Carol Louise, Los Angeles, Calif.
Proctor, Mrs. Dorsey E., Covina, Calif.
Prokes, Jerry E., St. Augustine, Fla.
Prokes, Mrs. Linda, St. Augustine, Fla.
Pronovost, Dr. Wilbert, Needham, Mass.
Propp, George, Lincoln, Nebr.
Provance, Ben F., Washington, D.C.
Provow, Estelle L., Devils Lake, N. Dak.
Pruden, Mrs. Catherine W., Trenton, N.J.
Pullum, Mrs. Patricia, Indianapolis, Ind.
Purdy, Burton F., Amherst, Nova Scotia, Canada

Purdy, Mrs. Helen E., Indianapolis, Ind.
Purdy, John D., San Antonio, Tex.
Purow, Mrs. Enid, Cheektowaga, N.Y.
Puryear, Mrs. Alice, Austin, Tex.

Q

Queiruga, Mrs. Linda E., Tucson, Ariz.
Querio, Eileen, Corona, Calif.
Quick, Marian, University Park, Pa.
Quigley, Dr. Howard M., Washington, D.C.
Quill, Eleanor R., Hartsdale, N.Y.
Quill, Mrs. Leonora, Champaign, Ill.
Quinn, Kathleen S., Ypsilanti, Mich.
Quinn, Mrs. Levere S., Riverside, Calif.
Quinn, Patricia D., Dorchester, Mass.
Quintana, Henrietta, Santa Fe, N. Mex.
Quintana, Linda B., Santa Fe, N. Mex.

R

Rabenau, Mrs. Leianna D., St. Louis, Mo.
Raco, Thomas G., Rochester, N.Y.
Radecky, Miss Gail A., Loudonville, N.Y.
Radvany, Charles, Trenton, N.J.
Rafferty, L. Dwight, Devils Lake, N. Dak.
Ragan, Elsie, Los Angeles, Calif.
Rahmlow, Howard H., Colton, Calif.
Rains, Mrs. Kathleen C., Columbus, Ohio
Rakyta, Paul, Torrington, Conn.
Raley, Norby, Cedar Creek, Tex.
Ramborger, William, Spartanburg, S.C.
Ranard, Mrs. Helene, West Hartford, Conn.
Randall, Mrs. Clemontine Y., Tucson, Ariz.
Randall, Mrs. Corinne, Vancouver, Wash.
Randall, Darrel D., Derby, Kans.
Randall, Mrs. Elizabeth, Knoxville, Tenn.
Randall, James, Vancouver, Wash.
Randall, Kenneth, St. Augustine, Fla.
Randall, Mrs. Patricia, Knoxville, Tenn.
Randel, Jack, Morganton, N.C.
Ranases, Mrs. Agapita, Salt Lake City, Utah
Ranier, Mrs. Linda, Sulphur, Okla.
Rank, Arvilla, Milwaukee, Wis.
Rankin, Ada, Great Falls, Mont.
Ransdell, William, Gurnee, Ill.
Ransom, Glenyce, Covina, Calif.
Rapp, Nancy, Talladega, Ala.
Rarus, Mrs. Nancy B., West Hartford, Conn.
Ras, Florence A., Ft. Lauderdale, Fla.
Rathe, Sharon K., Baltimore, Md.
Rattazzi, Donato, Jr., Bolton, Conn.
Rattray, Mrs. Phyllis, Brooks, Oreg.
Rau, Mrs. Elinor, Mt. Pleasant, Mich.
Raudenbush, Mrs. Lilah T., Minneapolis, Minn.
Ravn, Alden C., Jacksonville, Ill.
Ravn, Mrs. Caroline T., Jacksonville, Ill.
Rawlings, Charles G., Huron, Ohio
Ray, Eliza Jane, Wilson, N.C.
Ray, Lawrence, Faribault, Minn.
Ray, Louise B., Washington, D.C.
Ray, Max, Baton Rouge, La.
Raybould, Marilyn, Tucson, Ariz.
Raymond, Linda, Northridge, Calif.
Ready, J. Cleve, Fulton, Mo.
Reardon, Mrs. Dorothy A., Pittsfield, Kans.
Reay, Edward W., Gooding, Idaho
Recotta, Mrs. Patricia, Rochester, N.Y.
Redman, Mrs. Pat, Ada, Okla.
Reece, Mrs. Norma, Delavan, Wis.
Reece, Yolanda M., Baltimore, Md.
Reed, Harold A., Gooding, Idaho
Reed, Hilma, Little Rock, Ark.
Reed, Mrs. Marthada, Fulton, Mo.
Reed, Richard, Fulton, Mo.
Reeder, Andrea C., Hollywood, Calif.
Rees, Alberta M., W. Trenton, N.J.
Reese, Mrs. Janice, Clarks Summit, Pa.
Reeve, Mark, Harper Woods, Mich.
Reeves, Harriet, Spartanburg, S.C.
Reeves, Louis, Winnipeg, Man., Canada
Reeves, Mrs. Nancy M., Dallas, Tex.
Reeves, Rena S., Cedartown, Ga.
Reffi, Robert, Peterboro, N.H.
Regan, Lynn K., Sea Girt, N.J.
Rehrig, Mrs. Caroline D., Philadelphia, Pa.
Reid, H. Carl, Belleville, Ont. Canada
Reid, Mrs. Jaucile, Knoxville, Tenn.
Reidelberger, Mrs. Eleanor, St. Augustine, Fla.
Reidelberger, Henry J., St. Augustine, Fla.
Reilly, Mrs. Susan, Brooklyn, N.Y.
Reinke, Patricia A., Philadelphia, Pa.
Reising, Darlyne J., Brunswick, Ohio
Reitz, Edward, Omaha, Nebr.
Reitzer, Miriam L., Euclid, Ohio
Rembe, Raymond R., Cockeysville, Md.
Rembert, Willa Ruth, Columbia, S.C.
Renfro, Vicki, Tuscaloosa, Ala.
Renna, Edith V., New York, N.Y.
Rensberger, Mrs. Nina J., Indianapolis, Ind.
Renzulli, Mrs. Florie, Oakland, Calif.
Repass, Jan, Portland, Maine
Resignata, Sister Mary, Randolph, Mass.
Resnick, Mrs. Libby, Brooklyn, N.Y.
Reuck, Mrs. Blanche, Jacksonville, Ill.
Reyburn, Marian M., Bethany, Okla.
Reynolds, Barbara, Akron, Ohio
Reynolds, Mrs. Betty E., Roebuck, S.C.
Reynolds, Helen, Columbus, Ohio
Reynolds, Mrs. Henrietta, St. Augustine, Fla.

Reynolds, Lula A., Louisville, Ky.
Reynolds, Mrs. Mary E., West Springfield, Mass.
Rhoades, Sidney, Colorado Springs, Colo.
Rhodes, Margaret F., Augusta, Ga.
Rice, Amy May, Tulsa, Okla.
Rice, Mrs. Ferne R., Salem, Oreg.
Rice, Geraldine, Omaha, Nebr.
Rice, Mrs. Marcia, Council Bluffs, Iowa
Rice, Patricia, Faribault, Minn.
Rice, Mrs. Sabra, Fulton, Mo.
Rice, Mrs. Vivian Elaine, Oxon Hill, Md.
Richard, Mrs. Judyth A., Houston, Tex.
Richards, Mrs. Doris, Wareton, N.J.
Richards, Mrs. Veronica, Newington, Conn.
Richardson, Mrs. Gertrude A., Jackson, Miss.
Richardson, Mrs. Ruth, Vancouver, Wash.
Richey, Hilda, Delavan, Wis.
Richman, Karen, Cincinnati, Ohio
Rickel, Morris E., Alexander, Ark.
Rieger, Clifford, Tucson, Ariz.
Riekehof, Lottie L., Falls Church, Va.
Ries, Marsha M., Romney, W. Va.
Riese, Marie A., New York, N.Y.
Rightmyer, Mrs. Anne, Danville, Ky.
Rimm, Patricia S., East Hartford, Conn.
Ring, Mrs. Isobel, New York, N.Y.
Ripley, Sister Gail, Randolph, Mass.
Ripley, Peter H., Morganton, N.C.
Rippetoe, Mrs. Jacquelyn Y., Oklahoma City, Okla.
Riser, Catherine, Talladega, Ala.
Rislov, Kenneth, DeKalb, Ill.
Ritchie, Katherine A., White Plains, N.Y.
Roach, Dr. Robert E., Birmingham, Ala.
Robbins, Mrs. Berneice, Indianola, Iowa
Roberts, Carl P., Oklahoma City, Okla.
Roberts, Earl E., Flint, Mich.
Roberts, Mrs. Linda, Baton Rouge, La.
Roberts, Kathleen K., Bristol, Va.
Roberts, Robert, Tarrytown, N.Y.
Robertson, George, Fulton, Mo.
Robertson, Mrs. Marie, Jackson, Miss.
Robertson, Sister MaryAnn, Brooklyn, N.Y.
Robinson, Mrs. Carol, West Hartford, Conn.
Robinson, Ralph I., Colorado Springs, Colo.
Robirds, Cristine, Duncan, Okla.
Roche, Mrs. Elenora, Chicago, Ill.
Rochefort, Mrs. Browning P., Atlanta, Ga.
Rockwell, Dale L., Henrietta, N.Y.
Rockwell, Mrs. Sybil, Milwaukee, Wis.
Rodgers, Mrs. Esther J., Hermosa Beach, Calif.
Rodin, Bonnie S., Chicago, Ill.
Rodriquez, Ramon F., Las Cruces, N. Mex.
Roe, Mrs. Susan, North Little Rock, Ark.
Roebuck, Aaron A., Jackson, Miss.
Roebuck, Hazel M., Washington, D.C.
Roedder, Mrs. Gwen A., Birmingham, Ala.
Roesch, Irvin H., Watsonville, Calif.
Rogers, Barbara E., Jacksonville, Ill.
Rogers, Mrs. Bonnie, Austin, Tex.
Rogowski, Mrs. Mary, Ypsilanti, Mich.
Rohner, Lorri, Evanston, Ill.
Roloff, Mrs. Thelma, Rochester, N.Y.
Roman, Mrs. Jacqueline, Detroit, Mich.
Romero, Miguel B., Santa Fe, N. Mex.
Rompf, Mrs. Shirley, Stony Brook, N.Y.
Rood, Marvin S., Romney, W. Va.
Roper, Mrs. Jennie M., Morganton, N.C.
Roquemore, Mrs. Verna L., Houston, Tex.
Rorem, Mrs. Laura, St. Paul, Minn.
Roscoe, Mrs. Shirley A., Farmington, Mich.
Rose, Mrs. Anne Weaver, Cedar Crest, N. Mex.
Rose, J. Martin, Amherst, Nova Scotia, Canada
Rose, Mrs. Linda C., Omaha, Nebr.
Rose, Mrs. Shirley, Los Angeles, Calif.
Rose, Susan, Rochester, N.Y.
Rose, William D., Aptos, Calif.
Roseberry, Ann, Snyder, N.Y.
Rosen, Irvin, Middlebrook, Va.
Rosen, Mrs. Ruth, Staunton, Va.
Rosen, Mrs Willabell, Middlebrook, Va.
Rosenbloom, Mrs. Betty, Washington, D.C.
Rosenthal, Mrs. Dora A., Cleveland, Ohio
Rosenthal, Kathleen M., Scotch Plains, N.J.
Rosenweig, Mrs. Phyllis, Brightwaters, N.Y.
Rosica, Sebastian, Clarence, N.Y.
Rosner, Mrs. Carol S., Yonkers, N.Y.
Rosoff, Nancy E. Sharon, Mass.
Ross, Jerry, Flushing, N.Y.
Ross, Mrs. Karla, Milwaukee, Wis.
Ross, Mary, Olathe, Kans.
Rostan, June M., Valdese, N.C.
Roth, Dr. Stanley D., Olathe, Kans.
Rothstein, Susanne, Rochester, N.Y.
Rotolo, Mrs. Jean, Troy, Mich.
Rouquie, Mrs. Lewis D., Spartanburg, S.C.
Roussillou, Mrs. Barbara, Westbury, N.Y.
Rowan, Mary A., Washington, D.C.
Rowland, Mrs. Carolyn, Garden Grove, Calif.

Rowles, Joan K., Hyattsville, Md.
Royall, H. G., Jr., Morganton, N.C.
Royster, Mrs. Margaret, Danville, Ky.
Royster, Mary Anne, Danville, Ky.
Royster, James, Danville, Ky.
Rubenstein, Adrea A., Houston, Tex.
Rubert, Patricia, Norristown, Pa.
Rubiano, Alexander, Delavan, Wis.
Rucker, Delores G., Silver Spring, Md.
Rudarmel, Linda, St. Augustine, Fla.
Ruder, Gary, Great Falls, Mont.
Rudy, J. Paul, Newark, Del.
Rudy, Les H., Riverside, Calif.
Ruf, Pamela, Champaign, Ill.
Rugh, Mrs. Patricia A., Plainfield, N.J.
Rumford, Susan A., New Carrolton, Md.
Runyan, Linda K., Sulphur, Okla.
Runzo, David F., Rochester, N.Y.
Rupert, Mrs. Joan, Vacaville, Calif.
Rupert, Stanford, Vacaville, Calif.
Ruple, Mrs. Jo Fay, St. Augustine, Fla.
Ruple, Steven, St. Augustine, Fla.
Rupp, Joyce, Cincinnati, Ohio
Rusmisel, Mrs. Ruth E., Greeley, Colo.
Rusovick, Carol, Pueblo, Colo.
Russel, Lang, Oakland, Calif.
Russell, Mrs. Eula, Pensacola, Fla.
Russell, Mrs. M. Joyce, St. Augustine, Fla.
Rutledge, Mrs. Catherine, St. Clair Shores, Mich.
Rutledge, Mrs. Geraldine, Fresno, Calif.
Ryan, John Edward, New York, N.Y.
Ryan, Dr. M. Don, Denton, Tex.
Ryan, Pauline, Buffalo, N.Y.
Rybak, David, Buffalo, N.Y.
Rybak, John, Williamsville, N.Y.
Ryckman, Mrs. Gytha, Stony Mountain, Manitoba, Canada
Rynearson, Rodney R., Rochester, N.Y.
Ryniker, Mrs. Mary Ellen, San Antonio, Tex.
Rzeminski, Stanley V., Chicago, Ill.

S

Saabye, Mrs. Betty L., Salem, Oreg.
Sabella, Marie, Oreland, Pa.
Sabio, Mrs. Patrocinio S., Philadelphia, Pa.
Sacco, Beverly, East Rochester, N.Y.
Sachs, Marvin C., Rochester, N.Y.
Saenger, Mrs. Rose Lynn, San Antonio, Tex.
Sakamoto, Susan, Berkeley, Calif.
Salem, James M., Pittsburgh, Pa.
Sales, Marjorie E., Ada, Okla.
Salinas, Joe, Austin, Tex.
Salisbury, Mrs. Marylin, Holland, Mich.
Sallop, Marvin B, West Hartford, Conn.
Salter, Mrs. Marilyn B., Salem, Oreg.
Salvatore, Sister Mary, Randolph, Mass.
Samelian, Mrs. Gloria A., St. Cloud, Minn.
Samoore, Mrs. Rhoda G., Jacksonville, Ill.
Sample, Anna L., Long Beach, Calif.
Sampson, Mrs. Woodie, Jackson, Miss.
Sams, Wilbert, Baton Rouge, La.
Samson, Mrs. Dale, Cleveland, Ohio
Samuel, Mrs. Nancy T., Morristown, N.J.
Sanborn, Mrs. Marie, Omaha, Nebr.
Sanborn, Priscilla, Los Angeles, Calif.
Sanchez, Aurelio E., Santa Fe, N. Mex.
Sanders, Mrs. Joyce, Harrodsburg, Ky.
Sanders, Mrs. Lee, Knoxville, Tenn.
Sandler, Mrs. Ruth S., Lake Hiawatha, N.J.
Sangster, Mrs. Collette, Tonawanda, N.Y.
Sansom, Sandra L., Austin, Tex.
Sansone, John Fireside, Newark, Del.
Santianna, Mrs. Anna M., New Rochelle, N.Y.
Sapko, Mrs. Ada M., Pittsburgh, Pa.
Sartain, John R., Birmingham, Ala.
Sauer, Mrs. Nan, Knoxville, Tenn.
Saunders, Miss Erva M., Washington, D.C.
Saunders, Mrs. Martha M., Morganton, N.C.
Saunders, Rene, Suitland, Md.
Saxe, Mrs. Beulah, Delavan, Wis.
Saxon, Mrs. Mildred, Rochester, N.Y.
Sbarsky, Mrs. Shirley, Rosedale, N.Y.
Scalero, Angela, Los Angeles, Calif.
Scarvie, Mrs. Agnes, Council Bluffs, Iowa
Scattaretico, Mrs. Mary T., Yonkers, N.Y.
Schade, Mrs. Janet, San Antonio, Tex.
Schaefer, Mary Ann, Pittsburgh, Pa.
Schaeffer, Joseph, Kenmore, N.Y.
Schaeffer, Nancy, Salt Lake City, Utah
Scharff, Gary, Greeley, Colo.
Schatz, Mrs. Virginia W., Pittsburgh, Pa.
Scheerer, Stella M., Indianapolis, Ind.
Scheil, Margaret, Bayville, N.Y.
Schellin, Dorothy E., Houston, Tex.
Scheppach, Mrs. Jeannette, Madison, Conn.
Scheppach, Van Kent, Madison, Conn.
Scherer, Dr. Patricia A., Northbrook, Ill.
Scheringer, Antonia, St. Paul, Minn.
Schert, Kathie, Tallahassee, Fla.
Schieber, Mary T., Moosic, N.J.
Schielke, Alfred E., Trenton, N.J.
Schild, Mrs. Adelaide, Salem, Oreg.
Schiller, Eileen, Mineola, N.Y.
Schiller, Robert, Ypsilanti, Mich.
Schiller, Mrs. Sally G., Dallas, Tex.
Schillerstrom, Mrs. Carol G., Annandale, Va.
Schilling, Barbara, Millburn, N.J.
Schiltz, Kenneth, Tucson, Ariz.
Schindler, Mrs. Virginia N., Glendora, Calif.
Schipp, Dorothy, Scranton, Pa.
Schirmer, Barbara R., Cumberland, Md.

Schmaelzle, James G. Oklahoma City, Okla.
Schmidt, Burton S., Riverside, Calif.
Schmitt, Margaret, Wauwatosa, Wis.
Schmitt, Philip J., Washington, D.C.
Schmitz, Brenda K., Overland Park, Kans.
Schmitz, J. W., Tacoma, Wash.
Schoen, Mrs. Cheryl, Allen Park, Mich.
Schoenfeld, Jane, Salt Lake City, Utah
Schoolcraft, Mrs. Mary H., Shoshone, Idaho
Schoppert, Thelma L., Frederick, Md.
Schowalter, Eileen, Jacksonville, Ill.
Schowe, Dr. Ben M., Jr., Columbus, Ohio
Schrader, Patrick J., Colorado Springs, Colo.
Schreiber, Mrs. Annette, Penfield, N.Y.
Schrepper, Kenneth F., Chalfont, Pa.
Schroeder, Mrs. Elizabeth, Tucson, Ariz.
Schroeder, Mary Jo, Santa Fe, N. Mex.
Schroeder, Mrs. Meredith, Monmouth, Oreg.
Schuchmann, John, Washington, D.C.
Schuett, Jacolyn, Windom, Minn.
Schulberg, Mrs. Helen, New York, N.Y.
Schultz, Ervin W., Faribault, Minn.
Schultz, M. Gretchen, Phoenix, Ariz.
Schulze, Robert, Council Bluffs, Iowa
Schunhoff, Dr. Hugo F., Berkeley, Calif.
Schurman, Mrs. Reta M., Collingwood, Nova Scotia, Canada
Schutté, Mrs. Nancy C., Mt. Kisco, N.Y.
Schwake, William O., Sulphur, Okla.
Schwartz, Sharon, Skokie, Ill.
Schwartzman, Solomon, Pittsburgh, Pa.
Schwarz, Mrs. Doris Ethel, Bladensburg, Md.
Schwebach, Rhinella D., Eau Claire, Wis.
Schweiger, Carol L., New Brighton, Minn.
Schweitzer, Robert, Warren, Mich.
Sciarretta, Mrs. Janice, Danvers, Mass.
Sciortino, Joanne, Brooklyn, N.Y.
Scofield, Harry, Webster, N.Y.
Scott, Donald, Council Bluffs, Iowa
Scott, Mrs. Edith D., Doraville, Ga.
Scott, Edward W., Jacksonville, Ill.
Scott, Elizabeth, Washington, D.C.
Scott, Mrs. Evelyn J., Princeton, N.J.
Scott, Mrs. Fanny, Rome, Ga.
Scott, Mrs. Juanita H., Newport News, Va.
Scott, Saundra L., Lawrence, Kans.
Scouten, Edward, Fairport, N.Y.
Scouten, Mrs. Eleanor, Fairport, N.Y.
Scowcraft, Mrs. Anna Lou, Farmington, Mich.
Scozzari, Salvatore, White Plains, N.Y.
Scribner, Robert, Delavan, Wis.
Scully, Mrs. Mary J., Riverside, Calif.
Seaborn, Marlene, Mt. Pleasant, S.C.
Seadler, Mrs. Billie, Winter Park, Fla.
Seal, Albert G., Baton Rouge, La.
Seale, Mrs. Mary Anne E., Dallas, Tex.
Seals, Mrs. Rosie B., Jackson, Miss.
Seaman, Virginia, Mamaroneck, N.Y.
Searle, Linda L., Philadelphia, Pa.
Seawright, Mrs. Judy, Little Rock, Ark.
Sebrell, Mrs. Ruby, Staunton, Va.
Seeger, Julius, Austin, Tex.
Seeger, Mrs. Ruth, Austin, Tex.
Seeley, Kenneth R., Denver, Colo.
Seewald, Mrs. Carol V. E., Minneapolis, Minn.
Segreti, Mrs. Helen, Vancouver, Wash.
Seidel, John R., Rochester, N.Y.
Seifert, Gary F., Falls Church, Va.
Seiler, Peter J., Indianapolis, Ind.
Seivert, Joyce, Sioux Falls, S. Dak.
Seiz, Frances T., Peterboro, N.H.
Sellards, Mrs. Linda L., Dallas, Tex.
Sellner, Hubert, El Cerrito, Calif.
Senter, Mrs. Ruth, Omaha, Nebr.
Serafin, Stanley, Yakima, Wash.
Sessler, Charles H., Indianapolis, Ind.
Severance, Mrs. Dorothy, Gooding, Idaho
Sevigney, Pierre J., Romney, W. Va.
Sevilla, Ofelia M., St. Augustine, Fla.
Sewell, Mrs. Helen, Austin, Tex.
Sexton, Mrs. Charlotte, Satellite Beach, Fla.
Seymour, Mrs. Miriam, Seattle, Wash.
Shaddix, Mrs. Callie, Talladega, Ala.
Shafran, Mrs. Susan, Brooklyn, N.Y.
Shahan, Pauline J., Arlington, Va.
Shane, Timothy M., Morganton, N.C.
Shanholtz, Norman E., Romney, W. Va.
Shanholtzer, Mrs. Elfrieda P., Romney, W. Va.
Shannon, Mrs. Nora, Rochester, N.Y.
Shapiro, Mrs. Gloria, Detroit, Mich.
Shapiro, Mrs. Leslie, Skokie, Ill.
Sharp, Mrs. Elaine, Wausau, Wis.
Sharpe, Marguerite R., Frederick, Md.
Shaver, Elizabeth Ann, Newark, Del.
Shaver, Mildred A., Newark, Del.
Shaw, Adolphus, Cedartown, Ga.
Saywell, Mrs. Martha, Fort Collins, Colo.
Sheahan, Mary, New York, N.Y.
Sheehy, Patti, Omaha, Nebr.
Sheffman, Tamra, Santa Ana, Calif.
Shehan, Patricia, Omaha, Nebr.
Shelley, Terry, Southgate, Mich.
Shellgrain, Evelyn, Oakland, Calif.
Shepard, Mrs. Charlotte H., Salem, Oreg.
Shepard, Elgiva, Morganton, N.C.
Shepherd, Martha, Dallas, Tex.
Sheridan, Donald, Salem, Oreg.
Sherrill, Wilson, Morganton, N.C.

Sherry, Francilla, Willingboro, N.J.
Sherwood, Mrs. Patricia B., Jamaica, N.Y.
Shevlin, Cheryl, Staunton, Va.
Shibley, Luther, Little Rock, Ark.
Shickora, Mrs. Bernadette, Trenton, N.J.
Shields, Stephanie S., Riverside, Calif.
Shinault, Mrs. Alexandria, Jackson, Miss.
Shinault, John W., Jackson, Miss.
Shinpaugh, Joseph R., Staunton, Va.
Shipley, Mrs. Carolyn M., Rome, Ga.
Shipman, Elden E., Romney, W. Va.
Shipman, John, Staunton, Va.
Shippey, Mrs. Janis, Little Rock, Ark.
Shock, Charles, South Bend, Ind.
Shock, Mrs. Ruth, South Bend, Ind.
Shook, Leslee, Oklahoma City, Okla.
Shopshire, Jay, Staunton, Va.
Short, Mrs. Dorothy B., Spartanburg, S.C.
Short, Elizabeth, Spartanburg, S.C.
Shortridge, Jean A., Tucson, Ariz.
Shorty, Joyce, APO New York, N.Y.
Shough, Lee F., Ypsilanti, Mich.
Shouse, Steven A., Indianapolis, Ind.
Shouse, William R., Jacksonville, Ill.
Shotwell, Clayton M., Colorado Springs, Colo.
Shows, Mrs. Jane T., Shreveport, La.
Shrock, Nadine, Seattle, Wash.
Shrum, Susan, Pocatello, Idaho
Shull, Mrs. A. Jean, Gig Harbor, Wash.
Shuping, Ronald V., Morganton, N.C.
Shuster, Mrs. Esther M., Pittsburgh, Pa.
Shutsky, Fay, Washington, D.C.
Shutter, Patricia Lee, Santa Fe, N. Mex.
Siders, Bruce E., Flint, Mich.
Siegel, Cathy, Cincinnati, Ohio
Sielaff, Esther E., Dowling, Mich.
Siders, Judith, Ralston, Nebr.
Siegfried, Mrs. Alice G., Scottsdale, Ariz.
Siger, Dr. Leonard, Baltimore, Md.
Silberstein, Joel M., Spartanburg, S.C.
Silk, Duncan B., Colorado Springs, Colo.
Silverman, S. Richard, St. Louis, Mo.
Simeon, Sister Rose Cecilia, Pittsburgh, Pa.
Simmons, Al, Little Rock, Ark.
Simmons, M. Patricia, Sierra Madre, Calif.
Simmons, Sandra L., Wilson, N.C.
Simon, Barbara, Flushing, N.Y.
Simon, Mrs. Marilyn F., Orange, N.J.
Simonson, Carl A., Winnipeg 9, Man., Canada
Simpson, William K, Morganton, N.C.
Sims, Mrs. Lois, Austin, Tex.
Simonson, Sterling H., Sioux Falls, S. Dak.
Simpson, Mrs. Eileen M., Morganton, N.C.
Sinclair, Mrs. Deborah L., Riverside, Calif.
Sinclair, Mrs. Margaret P. Salem, Oreg. Oreg.
Sinclair, Mrs. Mary L., Frederick, Md.
Sinclair, J. Wayne, Frederick, Md.
Singer, Carolyn S., Rochester, N.Y.
Singer, Mrs. Karen, New York, N.Y.
Singleton, James E., Hampton, Va.
Singleton, Julian S., Salem, Oreg.
Sinko, Mrs. Garnet R., Miami, Fla.
Sio, Mrs. Phyllis, Rockford, Ill.
Sisson, Linda, Tacoma, Wash.
Sisti, Katharine A., Caldwell, N.J.
Sitar, Mrs. Magdalene W., Romney, W. Va.
Skaggs, Mrs. Edith S., Austin, Tex.
Skelton, Victoria A., Monrovia, Calif.
Skinner, Mrs. Lillian, Northridge, Calif.
Skinner, Nanci, Colorado Springs, Colo.
Skipper. Mrs. Selestine, Chicago, Ill.
Slack, Mrs. JoAnn, Austin, Tex.
Slade, Elwin B., Tucson, Ariz.
Sladek, Frank E., Tucson, Ariz.
Slan, Mrs. Linda C., Potomac, Md.
Slater, Mrs. Eppie, Vancouver, Wash.
Slater, Frank, St. Augustine, Fla.
Slater, Rita L., St. Augustine, Fla.
Slemenda, Mrs. Joan A., Pittsburgh, Pa.
Slemenda, John, Jr., Pittsburgh, Pa.
Sloboda, William P., Silver Spring, Md.
Slosar, Richard, Cleveland, Ohio
Sluck, Mrs. Patricia, Taylor, Pa.
Small, Paul, Moraga, Calif.
Smalls, Samuel, W. Trenton, N.J.
Smallwood, Dorothy, Riverside, Calif.
Smilor, Raymond, Austin, Tex.
Smith, Mrs. Ada H., Clearwater, Fla
Smith, Mrs. Alberta, Knoxville, Tenn
Smith, Mrs. Alice W., Morganton, N.C
Smith, Betsy, Mill Neck, N.Y.
Smith, Mrs. Beverly C., Trenton, N.J
Smith, Carol A., Pontiac, Mich.
Smith, Carol Ann, West Hartford, Conn
Smith, Carroll, Walnut Creek, Calif.
Smith, Carolyn, St. Augustine, Fla.
Smith, Mrs. Cherie, Austin, Tex.
Smith, Mrs. Diana L., Wichita, Kans
Smith, Mrs Dianne B. Morganton, N.C.
Smith, Mrs. Dorothy L., St. Augustine, Fla.
Smith, Mrs. Edna W., Washington, D.C.
Smith, Mrs. Elizabeth Ann, Sulphur, Okla.
Smith, Ellen M., Tacoma, Wash.
Smith, Etta L., Canoga Park, Calif.
Smith, Mrs. Faye M., Newport News, Va.
Smith, Mrs. Helen L., Las Vegas, Nev.
Smith, Janice E., Pittsburgh, Pa.
Smith, Jess M., Indianapolis, Ind.

Smith, Mrs. Jewell, Sulphur, Okla.
Smith, Joan A., Cheektowaga, N.Y.
Smith, Mrs. Judie M., Oklahoma City, Okla.
Smith, Mrs. Judy V., Olathe, Kans.
Smith, Kristine A., Fresno, Calif.
Smith, Mrs. Laure E., Morganton, N.C.
Smith, Linwood, Morganton, N.C.
Smith, Mrs. Louise S., Baton Rouge, La.
Smith, Mrs. Margaret, Palos Heights, Ill.
Smith, Mrs. Marjorie, Vancouver, Wash.
Smith, Mary Louise, Royal Oak, Mich.
Smith, Mrs. Mavis D., Sulphur, Okla.
Smith, Meredith, White Plains, N.Y.
Smith, Mrs. Patsy R., Knoxville, Tenn.
Smith, Mrs. Sara M., Indianapolis, Ind.
Smith, Stanley, Concord, Calif.
Smith, Stanley M., Houston, Tex.
Smith, Susan L., Dinuba, Calif.
Smith, Mrs. Valerie, Lake Charles, La.
Smrz, Mrs. Nancy E., Romney, W. Va.
Smrz, Richard F., Romney, W. Va.
Snapp, Mrs. Cecilia A., Fullerton, Calif.
Snell, Mrs. Mary, Austin, Tex.
Snowden, Billy, Austin, Tex.
Snyder, Charles, Staunton, Va.
Snyder, David M., Romney, W. Va.
Snyder, Mrs. Margaret G., Flint, Mich.
Soderberg, Mrs. Barbara, Superior, Wis.
Soehner, Michael J., Rochester, N.Y.
Soenksen, Victoria, Olathe, Kans.
Solancho, Mrs. Nenita C., Cerritos, Calif.
Solano, Sister Francis, Brooklyn, N.Y.
Solliday, Mrs. Sally, Jacksonville, Ill.
Solomon, Judith, Mamaroneck, N.Y.
Somers, Mrs. Wanda C., Virginia Beach, Va.
Sommer, Clarence E., Faribault, Minn.
Sommer, Mrs. Elizabeth, Faribault, Minn.
Somppi, Mrs. Ada, Great Falls, Mont.
Sonnenstrahl, Deborah, Wheaton, Md.
Sopko, Mrs. Ardelle, Austin, Tex.
Sopko, Mrs. Melissa G., Phoenix, Ariz.
Sluppick, Juanita, Memphis, Tenn.
Sorensen, Mrs. Gabriela B., Phoenix, Ariz.
Sorenson, Brenda G., Alhambra, Calif.
Souder, Mrs. Sydne, Des Moines, Iowa
Souvestre, Mrs. Agnes C., Metairie, La.
Sovin, Janet Mayerson, Berkeley, Calif.
Sowell, Mrs. Luda B., Riverside, Calif.
Spangler, Charlotte, Atlanta, Ga.
Sparks, Mrs. Hazelene, West Hartford, Conn.
Sparks, Fred L., West Hartford, Conn.
Spear, Mrs. Erma, Knoxville, Tenn.
Spector, Harold, West Trenton, N.J.
Spector, Leon, Trenton, N.J.
Speed, Mrs. Waneta, Salem, Oreg.
Speegle, Dr. James R., Rochester, N.Y.
Spellman, John F., Cranston, R.I.
Spence, Howard B., Springhill, Nova Scotia, Canada
Spencer, Mrs. Barbara B., Spartanburg, S.C.
Spencer, Mrs. Martha B., Columbus, Ohio
Spersted, Bert E., Dearborn, Mich.
Spidal, Dr. David A., Woodbridge, Va.
Spievack, Julie, Cincinnati, Ohio
Spinks, Mrs. Mary A., Ft. Devons, Mass.
Spiro, Mrs. Mary, Pittsburgh, Pa.
Spitzner, Mrs. Alice E., West Orange, N.J.
Spitznogle, Mrs. Marceil L., Salem, Oreg.
Spizzirri, Julius C., Los Angeles, Calif.
Spotts, Jane E., Wilson, N.C.
Sprickman, Alice, Buffalo, N.Y.
Spring, Judith, Tonawanda, N.Y.
Squire, Melvin L., Indianapolis, Ind.
St. Adrian, Sister Mary, Randolph, Mass.
St. Esther, Sister, Philadelphia, Pa.
St. John, Betty, Knoxville, Tenn.
St. John, Newton, Ormond Beach, Fla.
St. John, Warner, St. Augustine, Fla.
St. Pierre, Paul, Greenfield, N.H.
Stabler, Mary Elizabeth, Trenton, N.J.
Stack, Albert, Olathe, Kans.
Stack, Archie, Vancouver, Wash.
Stack, Hugh, Austin, Tex.
Stack, Luther, Delavan, Wis.
Stack, Mrs. Marianne, Vancouver, Wash.
Stack. Sister Patricia Marie, Pittsburgh, Pa.
Staehle, Jack M., White Plains, N.Y.
Stagliano, Michael, Rome, N.Y.
Stahl, Mrs. Margaret, Northport, N.Y.
Staley, Mrs. Sue W., Romney, W. Va.
Stambaugh, Mrs. Eileen, Frederick, Md.
Stamps, Mrs. Anna, Morganton, N.C.
Standley, C. Joseph, Jacksonville, Ill.
Stanek, Kenneth, Lackawanna, N.Y.
Stanfill, Mrs. Dorothy C., Indianapolis, Ind.
Stanfill, Lester C., Indianapolis, Ind.
Stangarone, James, Henrietta, N.Y.
Stanley, Mrs. Irene E., Pittsburgh, Pa.
Stansberry, David, Alden, N.Y.
Stanton, Ruth, Vancouver, Wash.
Stanulis, Gloria, Wilkes-Barre, Pa.
Stark, Bill, Jacksonville, Ill.
Stark, Mrs. Dianne, Jacksonville, Ill.
Stark, Mrs. Martha I., Jacksonville, Ill.
Stark, Patti, Denver, Colo.
Starmer, Mrs. Gwen J., Olathe, Kans.
Starr, Marjorie L., Youngstown, Ohio
Starrett, Mrs. Anne B., Morganton, N.C.
Stashkevetch, Barbara Sage, Piscataway, N.J.
Steadman, Mrs. Barbara T., Richardson, Tex.

Stearns, Dorothy H., Laurel, Md.
Steele, Alvin E., Jr., Cave Spring, Ga.
Steele, Janie N., Cave Spring, Ga.
Steely, Mrs. Patricia A., Salem, Oreg.
Steffey, Mrs. Mary, Staunton, Va.
Steffen, Sandra, Milwaukee, Wis.
Stegall, Ralph C., Jr., Morganton, N.C.
Stegman, Jean, Washington, D.C.
Stehman, Jean M., Evanston, Ill.
Steigerwald, Mrs. Jill, South Casco, Maine
Steigman, Hugo, Visalia, Calif.
Stein, Shirley P., Chevy Chase, Md.
Steinbrecher, Mrs. Rosemary R., Los Angeles, Calif.
Steinfeldt, Paul, West Jordan, Utah
Steinmueller, Cara, Detroit, Mich.
Stelle, Dr. Roy M., White Plains, N.Y.
Stelling, Jessica, New York, N.Y.
Stephan, Joan Harris, Minneapolis, Minn.
Stephens, Mrs. Barbara, Pace, Fla.
Stephens, Mrs. Gladys G., Sulphur, Okla.
Stephens, Mrs. Joann, Normal, Ill.
Stephens, Linda C., Costa Mesa, Calif.
Stephens, S. S., Amarillo, Tex.
Stephens, Vicki A., Hermosa Beach, Calif.
Stephenson, Carl M., Riverside, Calif.
Stephenson David D., Washington, D.C.
Stepp, Mrs. Geverna C., Rome, Ga.
Stergies, Mrs. Leonides C., Cambridge, Mass.
Stern, Mrs. Virginia W., Washington, D.C.
Sternberg, Martin L. A., Forest Hills, N.Y.
Steven, Flora, Buffalo, N.Y.
Stevens, Barbara, Silver Spring, Md.
Stevens, James, St. Augustine, Fla.
Stevens, Mrs. Joyce, San Bernardino, Calif.
Stevens, Mrs. Linda, Little Rock, Ark.
Stevens, Mrs. Marguerite, Baton Rouge, La.
Stevens, Mary Anne, Portland, Maine
Stevens, Raymond P., Brattleboro, Vt.
Stevens, Mrs. Teresa H., Watchung, N.J.
Stevens, William E., Silver Spring, Md.
Stevenson, Mrs. Lucretia P., Washington, Ind.
Stevenson, Mrs. Virginia Lee, Tucson, Ariz.
Stewart, Mrs. Dorothy, Austin, Tex.
Stewart, Elizabeth, Winnsboro, S.C.
Stewart, Eugene, Treynor, Iowa
Stewart, Helen L., Lebanon, Pa.
Stewart, Mrs. Jane B., Pittsburgh, Pa.
Stewart, Jerry, St. Augustine, Fla.
Stickney, Mrs. Iola, Santa Rosa, Calif.
Stiegerwald, Mrs. Ileen P., Riverside, Calif.
Stiff, Mrs. Margaret A., Fenton, Mich.
Stine, Mrs. Blanche, Fulton, Mo.
Stokley, Geraldine, Edenton, N.C.
Stoddard, Judith Ann, Hingham, Mass.
Stoefen, Jill, Casper, Wyo.
Stokely, Mrs. Frances B., Spartanburg, S.C.
Stokes, Mrs. Sarah M., Florence, S.C.
Stokesbary, Glenn, Vancouver, Wash.
Stokesbary, Mrs. Jean, Vancouver, Wash.
Stolle, Gretchen M., S. Pasadena, Calif.
Stoller, Iris, Elmont, N.Y.
Stoltenberg, Doran, Vancouver, Wash.
Stoltzfus, Elvin R., Ronks, Pa.
Stone, Mrs. Donna, Chicago, Ill.
Stone, Mrs. Glenn, Wilson, N.C.
Stone, Mrs. Pauline M., Jackson, Miss.
Stotts, Joseph, Vancouver, Wash.
Stoudt, Mrs. Pamela H., Lawrence, Kans.
Stout, L. Gail, Indianapolis, Ind.
Stovall, Mrs. Annie, Little Rock, Ark.
Straszewski, Lorraine, Shorewood, Wis.
Strickett, Barbara A., Dallas, Tex.
Strieby, Mrs. Dorothy, Delavan, Wis.
Streiby, Edward, Delevan, Wis.
Striggow, Charlene, Urbana, Ill.
Stringfield, Mrs. Maude, Little Rock, Ark.
Strizver, Nancy, Laurel, Md.
Strohmeier, Sara A., Trenton, N.J.
Stromswold, Omund D., Mill Valley, Calif.
Strong, Ernest C., Kern City, Calif.
Strong, Mrs. Florine W., Riverside, Calif.
Strong, Edith, Atlanta, Ga.
Stroud, George H., St. Augustine, Calif.
Stuart, Katherine, Dallas, Tex.
Stuckless, Dr. E. R., Rochester, N.Y.
Studnicky, Joan, Champaign, Ill.
Studwell, Jacquelynne, Houston, Tex.
Stump, Geraldine S., Romney, W. Va.
Stump, JoAnne Mary, La Salle, Quebec, Canada
Sturgeon, Ronald, Vancouver, Wash.
Stushek, Lynn, Appleton, Wis.
Suddreth, Mrs. Paula W., Gastonia, N.C.
Sullivan, Eleanor, Stoughton, Maine
Sullivan, Mrs. Estelle, West Falmouth, Maine
Sullivan, Gerald L., Frederick, Md.
Sullivan, James A., Placentia, Calif.
Sullivan, James F., Washington, D.C.
Sullivan, Katie, Ypsilanti, Mich.
Sultan, Mrs. Blanche, Westbury, N.Y.
Summa, Margaret A., Port Chester, N.Y.
Summers, Alan K., Yardley, Pa.
Summers, Hubert D., Las Cruces, N. Mex.

Sundaresan, Savithri, Ceres, Calif
Sutter, Elaine, Vancouver, Wash.
Suttlemyre, Gary, Layton, Utah
Sutton, Lee B., Knoxville, Tenn.
Sutton, Mrs. Lottie V., Wilson, N.C.
Sutton, Mrs. Marlene, Portuguese Bend, Calif.
Swartz, Mrs. Mary Jane, Indianapolis, Ind.
Sweat, Mrs. Barbara D., Talladega, Ala.
Sweatt, Jeri, Kosciuski, Miss.
Sweeney, Mary Lou, Faribault, Minn.
Sweet, Mrs. Myrle, Richmond, Calif.
Swift, Mrs. Carol S., Pittsburgh, Pa.
Swinney, Mrs. Lonna G., Dallas, Tex.
Swisher, Mary V., Minneapolis, Minn.
Sydnor, Jacqueline, Hampton, Va.
Syra, Sister M., Chicago, Ill.
Szajna, Helen, Warren, Mich.
Szmanski, Mrs. Mary, Grand Island, N.Y.
Szopa, Mrs. Marie, Middletown, Conn.
Szuba, Jennie, Lackawanna, N.Y.
Szuszitzky, Tom C., Santa Fe, N. Mex.

T

Tabacek, Evelyn A., Pittsburgh, Pa.
Tait, Mary, South Lyndeboro, N.H.
Takacs, Cloria J., Willowick, Ohio
Talbot, Dr. Mabel, Council Bluffs, Iowa
Tantum, Cynthia S., Westminister, Md.
Tarins, Jack B., North White Plains, N.Y.
Tarkanian, Mrs. Lois, Huntington Beach, Calif.
Tarnosky, Mrs. Marlene S., Pittsburgh, Pa.
Tart, Mrs. Virginia W., St. Augustine, Fla.
Tarter, Mrs. Gwendolyn B., Baltimore, Md.
Tasker, Vivian, Bloomington, Ill.
Tassin, Mrs. Marie, Baton Rouge, La.
Tate, Olen, Talladega, Ala.
Tate, Mrs. Violet, Baton Rouge, La.
Taylor, Connie, Thermopolis, Wyo.
Taylor, Dana R., Big Spring, Tex.
Taylor, Doris H., Washington, D.C.
Taylor, Mrs. Dorothea B., Lyman, S.C.
Taylor, Mrs. Dorothea K., Lakeland, Fla.
Taylor, Mrs. Dorothy L., Jackson, Miss.
Taylor, Evelyn, Knoxville, Tenn.
Taylor, Mrs. Frances, Morganton, N.C.
Taylor, Mrs. Jane R., Morganton, N.C.
Taylor, Mrs. Jean, Salem, Oreg.
Taylor, Jerry Ray, Ogden, Utah
Taylor, John E., Salem, Oreg.
Taylor, Leonard, Fulton, Mo.
Taylor, Mrs. Lucile N., Delavan, Wis.
Taylor, Myra Jane, Huntington Park, Calif.
Taylor, Mrs. Rebekah L., Wilson, N.C.
Taylor, Robert, North Salem, N.Y.
Taylor, Velda L., Danville, Ky.
Teas, Mrs. Susan P., Norman, Okla.
Tedford, Mrs. JoAnne, Winston-Salem, N.C.
Tegeder, Robert W., Ogden, Utah
Teets, Mrs. Beverly J., Salem, Oreg.
Teets, Mr. Royal, Salem, Oreg.
Teitelbaum, Bernard, White Plains, N.Y.
Tellam, Mrs. Joan, Tucson, Ariz.
Tellam, William, Tucson, Ariz.
Templin, Mrs. Carol, Jacksonville, Ill.
Tennis, Mrs. C. Ann, Berkeley, Calif.
Tennis, Mrs. Donaldina, Riverside, Calif.
Terango, Dr. Larry, Johnson City, Tenn.
Teresita, Sister Mary, Randolph, Mass.
Terheun, Mrs. Bernice, Santa Clara, Calif.
Terreri, Herbert, Santa Ana, Calif.
Terrinoni, Theresa A., Scranton, Pa.
Terry, Mrs. Joyce A., Torrance, Calif.
Testut, Eldred W., Oklahoma City, Okla.
Tetlow, Josephine A., Pittsburgh, Pa.
Tetreault, Edward L., Huntington Park, Calif.
Teuber, Hartmut, Allenstown, N.H.
Thaler, Rev. Earl J., West Hartford, Conn.
Thatcher, Isabelle, Ogden, Utah
Theresa, Sister Miriam, Randolph, Mass.
Thetford, Mrs. Mamie, Sulphur, Okla.
Theurer, Deborah, New Orleans, La.
Thierfelder, Mrs. Katy L., Houston, Tex.
Thiede, Lester E., Chicago, Ill.
Thielman, Mrs. Virginia, Glendale, Calif.
Thill, Mrs. Dorothy, Sioux Falls, S. Dak.
Thomas, Alyce, Riverside, Calif.
Thomas, Mrs. Annie, Jackson, Miss.
Thomas, Charles, Danville, Ky.
Thomas, Mrs. Claudell, Enid, Okla.
Thomas, Mrs. Grace D., Salem, Oreg.
Thomas, Jasper N., Houston, Tex.
Thomas, Mrs. Johnnie, Sulphur, Okla.
Thomas, Judy, Rochester, N.Y.
Thomas, Sara L., Ft. Walton Beach, Fla.
Thompson, Amelia, Ft. Collins, Colo.
Thompson, Mrs. Annette S., Dallas, Tex.
Thompson, Bea, Canyon, Tex.
Thompson, George, Omaha, Nebr.
Thompson, Joe Ed, Austin, Tex.
Thompson, Mrs. Lois, Warren, Mich.
Thompson, Lowell A., Tucson, Ariz.
Thompson, Mrs. Martha F. E., Danville, Ky.

Thompson, Mary Ann, Oakland, Calif.
Thompson, Dr. Richard E., Needham, Mass.
Thompson, Terry Ann, St. Louis, Mo.
Thoms, Mrs. Janice L., Manhattan, Kans.
Thomson, Robert J., St. Augustine, Fla.
Thomson, Ruth Ann, West Trenton, N.J.
Thoreson, Mrs. Margaret, Vancouver, Wash.
Thornton, Mrs. Elizabeth, Colorado Springs, Colo.
Thornton, Mrs. Linda, Jackson, Miss.
Thornton, William A., Riverside, Calif.
Thrash, Mrs. Saxon S., Birmingham, Ala.
Threalkeld, Mrs. Frances, Dallas, Tex.
Thurber, Albert K., North Ogden, Utah
Thvedt, Rev. I. M., Faribault, Minn.
Tiano, Mrs. R. Gwyn, Santa Fe, N. Mex.
Tiberio, Carmen S., St. Augustine, Fla.
Tiberio, Mrs. Eloise, St. Augustine, Fla.
Tidwell, Genoa E., Sulphur, Okla.
Tiff, Mrs. Mary S., Shawnee Mission, Kans.
Tiffany, John, Dixon, Ill.
Tilley, Susan, Austin, Tex.
Tillinghast, Edward W., Tucson, Ariz.
Timlin, Patricia, Scranton, Pa.
Timney, Mrs. Irene, Tucson, Ariz.
Tims, Martha A., Lenexa, Kans.
Tinsley, Mrs. Christine E., Houston, Tex.
Tinsman, Mrs. Mary E., Battle Ground, Wash.
Tinsmith, Ernest G., Bronx, N.Y.
Tinsmith, Mrs. Vilma, Greenfield, N.H.
Tisdale, Hope, Austin, Tex.
Titsworth, Elizabeth F., Trenton, N.J.
Titus, James, Council Bluffs, Iowa
Titus, James R., Spencerport, N.Y.
Titus, Susie, Tustin, Calif.
Tobertson, Mrs. Pearl, Winnipeg 19, Man., Canada
Tobias, Mrs. Robert E., Islip, N.Y.
Todd, Andrew, Northridge, Calif.
Tollefson, Olaf, Salem, Oreg.
Tomlin, Bill, Rockford, Ill.
Toms, Mrs. Julia H., Chattanooga, Tenn.
Toner, Helen A., San Bernardino, Calif.
Toohey, Jerome F. Jr., Baltimore, Md.
Toomey, Sister Eileen, Randolph, Mass.
Toomey, Mrs. Jean E., Grand Blanc, Mich.
Topel, Mrs. Lauren, Morton Grove, Ill.
Torbert, Faye D., Mobile, Ala.
Touch, JoAnn, M., Archbald, Pa.
Tower, Mrs. Janet C., Indianapolis, Ind.
Trabman, Bernice, Detroit, Mich.
Tracy, Dolores Marie, White Plains, N.Y.
Train, Alice, Pembroke, N.H.
Traub, Mrs. Goldie S., Atlanta, Ga.
Traylor, Robert, Council Bluffs, Iowa
Traylor, William C., Flint, Mich.
Trboyevich, Goldie, Washington, D.C.
Treb, Mrs. Susan, Plover, Wis.
Trevarthen, Mrs. Marjorie, Vancouver, Wash.
Triebert, Mrs. Marjorie M., Morganton, N.C.
Triebert, Raymond F., West Hartford, Conn.
Trigueiro, Kenneth H., San Diego, Calif.
Troiano, Mrs. Ellen C., Pittsburgh, Pa.
Trubov, Mrs. Phyllis S., Columbus, Ohio
Trott, Joan V., Edmonton 62, Alberta, Canada
Trujillo, Lydio, Buffalo, N.Y.
Trukken, Elaine M., Faribault, Minn.
Tubb, Lonnie, Little Rock, Ark.
Tucci, Mark, Trenton, N.J.
Tuccinardi, Mrs. Norma, Vancouver, Wash.
Tuccinardi, Richard, Vancouver, Wash.
Tucker, Jack F., Sulphur, Okla.
Tucker, Mary, Wausau, Wis.
Tuininga, Mrs. Phyllis, Omaha, Nebr.
Tule, Donna R., Tallahassee, Fla.
Turley, Bruce E., Frederick, Md.
Tullos, Mrs. Constance, Knoxville, Tenn.
Tullos, Olouse, Knoxville, Tenn.
Tuma, Richard W. Sr., Willingboro, N.J.
Tupas, Carmen M., Greenfield, N.H.
Turecheck, Dr. Armin G., Colorado Springs, Colo.
Turecheck, Mrs. Elsie B., Colorado Springs, Colo.
Turk, Bernice G., Washington, D.C.
Turk, Hosea, Birmingham, Ala.
Turke, Mrs. Nora M., Jacksonville, Ill
Turley, Bruce E., Wilson, N.C.
Turnbull, Maxine, Tucson, Ariz. N.C.
Tuttle, Mrs. Bernice O., Morganton N.C.
Tuttle, Marvin O., Morganton, N.C.
Tuttle, Mrs. Mary B., Morganton, N.C.
Tweedie, David, Athens, Ga.
Twidwell, Marjorie B., Tulsa, Okla.
Twining, J. Dean, Muncie, Ind.
Tyson, Mrs. Theresa D., Baton Rouge, La.
Tyskiewicz, Mrs. Arlene J., Chicago, Ill.

U

Uhlig, Rev. Walter D., Sioux Falls, S. Dak.
Uhrig, Mrs. Elaine, Greeley, Colo.
Uldrych, Mrs. Jean M., Robbinsdale, Minn.
Ullrich, Mrs. Elizabeth P., Danville, Ky.
Ulmer, Mrs. Georgia K, Salem, Oreg.
Ulmer, Thomas A., Salem, Oreg.
Umstead, Mrs. Ethel A., Fontana, Calif.
Underhill, Mrs. Kathleen, P., Morganton, N.C.
Underwood, Mrs. Lillian M., Indianapolis, Ind.
Ungar, Claire, Bronx, N.Y.
Updegraff, David R., Potomac, Md.
Updike, Gary J., Kansas City, Mo.
Uridil, Kathleen, Omaha, Nebr.

V

Valentine, Bruce C., Scranton, Pa.
VanAken, Francis, Rochester, N.Y.
VanBockern, Mrs. Charlotte, Sioux Falls, S.C.
Van Brakle, Barbara R., Washington, D.C.
Van Cott, Daniel M., Cave Spring, Ga.
Vanderveer, Mrs. Colette, Peekskill, N.Y.
Van Drimmelen, Thomas Jr., Ogden, Utah
Van Houten, Bernadette, San Francisco, Calif.
Van Ittersum, Mrs. Sharon, Detroit, Mich.
Van Luven, Dr. Elizabeth A., Hyattsville, Md.
Van Manen, Marion, Sunnyvale, Calif.
Van Manen, Mrs. Mary L., St. Augusine, Fla.
Van Praag, Mrs. Anna H., Upland, Calif.
VanPul, Mrs. Margaret H., Hyattsville, Md.
Van Roekel, Willis, Portland, Oreg.
VanRosendal, Mrs Dorothy, Jacksonville, Ill.
VanSanten, Mrs. Osie, Salem, Oreg.
Van Tighem, Mrs. Betty, Great Falls, Mont.
Varkados, Mrs. Despena, Vancouver, Wash.
Vasnick, Andrew, Ardsley, N.Y.
Vasquez, Laura, APO New York, N.Y.
Vassey, Mrs. Rebecca D., Spartanburg, S.C.
Vasys, Mrs. Mary E., San Antonio, Tex.
Vaughan, Edna M., Houston, Tex.
Vaughan, Miss Verdry D., Hyattsville, Md.
Vaught, Mrs. Elizabeth, Danville, Ky.
Veele, Mary, Ypsilanti, Mich.
Velardi, John, Washington, N.J.
Ventura, Mrs. Barbara Amen, Irwin, Pa.
Verdecanna, Rosemary, Bronx, N.Y.
Vergara, Kathleen, C., Middletown, R.I.
Vesey, Sister Claire, Randolph, Mass.
Vetter, Carol E., St. Paul, Minn.
Vezina, Mrs. Isabelle, Peterborough, N.H.
Vinci, Mrs. Hazel, Middletown, Conn.
Viole, Mrs. Carol M., Los Angeles, Calif.
Virnig, Joanne, Omaha, Nebr.
Virok, Grace M., Trenton, N.J.
Visser, Mrs. Sharon, Phoenix, Ariz.
Vitale, Sister Claude Maria, Brooklyn, N.Y.
Vivian, Rose M., Malden, Mass.
Vlug, Henry, Vancouver 15, B.C., Canada
Volker, Mrs. Marilyn K., St. Louis, Mo.
Von Drach, Robert, Levittown, Pa.
Von Tickner, Jim K., Richmond, Calif.
Vose, Mrs. Edie, Lake Oswego, Oreg.
Vreeland, Richard S., Monterey, Calif.

W

Wade, Sarah, Cave Spring, Ga.
Wade, Mrs. Susan L., Dallas, Tex.
Wagner, C. Richard III, Amarillo, Tex.
Wagner, Pamela, Pottstown, Pa.
Wahl, Mrs. Allois W., Jacksonville, Ill.
Wahl, Howard P., Jacksonville, Ill.
Wahl, Lewis B., St. Louis, Mo.
Wahl, Roger, Council Bluffs, Iowa
Wahlgren, Mrs. Helen, Boca Raton, Fla.
Wahrle, Jackie, Tallahassee, Fla.
Wait, Eugene, Knoxville, Tenn.
Wait, Mark A., Frederick, Md.
Wait, Mrs. Mildred J., Frederick, Md.
Waits, Mrs. Lynda T., Rome, Ga.
Walcher, Mrs. Helen R., Oklahoma City, Okla.
Waldorf, Frederick Preston, Vineland, N.J.
Wales, Billy R., Riverside, Calif.
Walker, Arch, Stanford, Ky.
Walker, Mrs. E. Ruth, University, Ala.
Walker, Isabelle, P., Stanford, Ky.
Walker, N. F., Spartanburg, S.C.
Walker, Ruth F., Los Angeles, Calif.
Walker, Mrs. Sallie, Knoxville, Tenn.
Wall, Mrs. Alice B., Raymond, N.H.
Wall, Mrs. Pauline, Danville, Ky.
Wallace, Susan, Knoxville, Tenn.
Wallin, William, H., Las Vegas, Nev.
Wallis, Ann, Austin, Tex.
Wallis, Mrs. Janiece M., Santa Fe, N. Mex.
Wallis, Mrs. Milton, H., Talladega, Ala.
Walman, Neil, Mt. Vernon, N.Y.

Walmsley, Constance, Los Angeles, Calif.
Walsh, Mrs. Ann Marie, Bayville, N.Y.
Walsh, Jean M., Newark, N.J.
Walsh, Patricia, Buffalo, N.Y.
Walter, Dr. Gerard G., Rochester, N.Y.
Walter, Karen, Brush, Colo.
Walters, Glenn C., Colorado Springs, Colo.
Walters, Helen P., Santa Clara, Calif.
Walters, Mrs. Marion, Omaha, Nebr.
Walters, Sam, Anniston, Ala.
Waltersdorf, Mrs. Elna, Omaha, Nebr.
Waltman, JoBeth, Colorado Springs, Colo.
Waltrip, Mrs. Betty, Fulton, Mo.
Wampler, Dennis W., Santa Rosa, Calif.
Wanat, Mrs. Mary, Amherst, N.Y.
Wand, Carl, Forest Hills, N.Y.
Wang, Mrs. Tamie C., East Lansing, Mich.
Warchol, Barbara, Rochester, N.Y.
Ward, Mrs. Agnes B., Perryville, Ky.
Ward, Mrs. Dorothy, Blackfoot, Idaho
Ward, Mrs. Rosie, Jackson, Miss.
Ward, Mrs. Sara, Knoxville, Tenn.
Ward, Virginia M. Danville, Ky.
Warden, Mrs. Sheridan, Ann Arbor, Mich.
Ware, Margaret L., Tallahassee, Fla.
Warner, Don W., Ogden, Utah
Warren, Ann Mills, Washington. D.C.
Warren, Mrs. Betty C., Jackson, Miss.
Warren, Mrs. Carrie, Omaha, Nebr.
Warren, Judith Gibson, Plattsburgh, N.Y.
Warren, Mrs. Mozelle, Austin, Tex.
Wasell, Mrs. Irene L., Inglewood, Calif.
Washburn, Arthur O., Denver, Colo.
Waterman, Joan, Jacksonville, Fla.
Waters, Lee L. Carol Stream, Ill.
Waters, Sharon, J., Tustin, Calif.
Watkins, Mrs. Carla, North Little Rock, Ark.
Watkins Mrs. Dorothy H., Pittsburgh, Pa.
Watkins, Earl, Delavan, Wis.
Watson, Chefera, Evanston, Ill.
Watson, Mrs. Evelyn W., Morganton, N.C.
Watson Dr. Guy A., Hyattsville, Md.
Watson, Mrs. Jean B., Wilson, N.C.
Watson, Robert C., Wilson, N.C.
Waugaman, Mrs. Jane W., Pittsburgh, Pa.
Way, Myrna, Stowall, Tex.
Waye, Constance K., Romney, W. Va.
Wayman, Mrs. Martha S., Pittsburgh, Pa.
Wayner, William H., Canton, Ohio
Weaver, Mrs. Edith, Staunton, Va.
Weaver, Mrs. Phoebe, Baton Rouge, La.
Weaver, Dr. Ross M., Provo, Utah
Webb, Mrs. Mary Ann A., Valdosta, Ga.
Webber, Mrs. Elizabeth M., Spartanburg, S.C.
Weber, Gayle, Scranton, Pa.
Weber, Jimmie D., Clairton, Pa.
Webster, Marian, Webster, N.Y.
Weed, Margaret, St. Augustine, Fla.
Weeks, Lucie E., Newark, Del.
Wegner, Wilhelm, Delavan, Wis.
Weher, Virginia, Sea Cliff, N.J.
Wehrli, Robert, Washington, D.C.
Weida, Lois Jean, Dallas, Tex.
Weidner, Eunice, Mill Neck, N.Y.
Weinberg, Mrs. Audrey, Oyster Bay, N.Y.
Weir, Robert C., Lansing, Mich.
Welch, Mrs. Beulah, Rome, Ga.
Welch, Charles W., Annandale, Va.
Welch, Guy, Rome, Ga.
Welsh, Kitty, Redondo Beach, Calif.
Weller, Rosemary D., Oxen Hill, Md.
Welling, Jean, North Ogden, Utah
Wells, Mrs. Catherine P., Flint, Mich.
Wells, Charles A., Flint, Mich.
Wells, Miss Deanne, Riverside, Calif.
Wells, Douglas O., Metairie, La.
Wells, Mrs. John B., Raleigh, N.C.
Wells, Sally, San Antonio, Tex.
Wells, William H., Spartanburg, S.C.
Welsh, Mrs. Verna T., Miami, Fla.
Wenning, Judy A., Rochester, N.Y.
Werner, DaWayne, Staunton, Va.
Wesley, Mrs. Zelma L., Hyattsville, Md.
West, Mrs. Angeleen, Austin, Tex.
West, David C., Santa Fe, N. Mex.
West, Mrs. Elizabeth, Jacksonville, Ill.
West, Miss Kay E., Northridge, Calif.
West, Larry E., Frederick, Md.
Westendorf, Mrs. Esther, Cedar Falls, Iowa
Westfall, Judith Marie, Staunton, Va.
Westfall, Norma, Denver, Colo.
Wetzel, Rodger W., Devils Lake, N. Dak.
Whaley, Mrs. Katherlyn, Cedartown, Ga.
Wheeler, Kathleen, Allston, Mass.
Wheeler, Mrs. Leota F., Columbus, Ohio
Wheeler, Mrs. Leslie, Baton Rouge, La.
Whisman, Charles E., Indianapolis, Ind.
Whitaker, Mrs. Frances, Raleigh, N.C.
White, Dorothy, Union City, Tenn.
White, Mrs. Frances, Austin, Tex.
White, Mrs. Gail J., Ann Arbor, Mich.
White, Mrs. Gloria W., Norwich, Conn.
White, Henry L., Elkton, Fla.
White, John, Raymond, Miss.
White, M.M., Vancouver 8, B.C., Canada
White, Mrs. Susan W., Hattiesburg, Miss.
White, Mrs. Viola W., Elkton, Fla.
White, Walter E., Gooding, Idaho
Whitehouse, Mrs. Karla, Danville, Ky.
Whitehouse, Mrs. Mary, Danville, Ky.
Whitehurst, Mrs. F. C. Orlando, Fla.

Whitmire, James E., Roebuck, S.C.
Whitney, Kenneth, Vancouver, Wash.
Whitney, Patricia, Wisconsin Rapids, Wis.
Whitson, Edward, T., Jr., Greenville, S.C.
Whitson, Judy, Little Rock, Ark.
Whitt, Alonzo, Chicago, Ill.
Whittenberg, Mrs. Concile D., Cowpens, S.C.
Whitworth, Jimmy H., Cave Spring, Ga.
Wichman, Diana, Queens Village, N.Y.
Wick, E. Marshall, Henrietta, N.Y.
Wickman, Claudia, San Pablo, Calif.
Wickstrom, Mrs. Linda, Stevens Point, Wis.
Widmer, Henry, Jacksonville, Ill.
Wiebe, Mrs. Margurete, Orosi, Calif.
Wilbur, Elizabeth, Westbrook, Maine
Wilcox, Gordon, Minneapolis, Minn.
Wild, Barbara L., Tucson, Ariz.
Wilding, David, Gooding, Idaho
Wilkerson, Henry L., Baton Rouge, La.
Wilkes, Mrs. Penny T., Tucson, Ariz.
Wilkie, Mrs. Josie T., Spindale, N.C.
Wilkins, Frances, Bronx, N.Y.
Wilkinson, Donald F., Santa Fe., N. Mex.
Wilkinson, Mrs. Mattie L., Jackson, Miss.
Wilkinson, Myrlene, Vancouver, Wash.
Willard, Margaret S., Pittsburgh, Pa.
Willcoxon, Dorothy, Austin, Tex.
Willemsma, Tena, Romney, W. Va.
Williams, Mrs. Barabara, Austin, Tex.
Williams, Carl L., Morganton, N.C.
Williams, Mrs. Carolyn, Knoxville, Tenn.
Williams, Mrs. Diane R., Colorado Springs, Colo.
Williams, Donna K., Salem, Oreg.
Williams, Mrs. Elizabeth D., Romney, W. Va.
Williams, Mrs. Elvira, Omaha, Nebr.
Williams, Eunice E., Salem, N.J.
Williams, Mrs. Helen, Fulton, Mo.
Williams, Mrs. Jane, Morganton,N.C.
Williams, Mrs. Jewell, Austin, Tex.
Williams, Judith, Landover, Md.
Williams, Katherine A., University, Ala.
Williams, Mrs. Laura F., Jackson, Miss.
Williams, Mrs. Lenora, Jackson, Miss.
Williams, Marcus, Austin, Tex.
Williams, Mrs. Marilyn, Morganton, N.C.
Williams, Martha, Talladega, Ala.
Williams, Norman, Sr., Trenton, N.J.
Williams, Mrs. Sharon, Little Rock, Ark.
Williams, Mrs. Sondra S., Pittsburgh, Pa.
Williams, William H., Pittsford, N.Y.
Williamson, Mrs. Elaine, Knoxville, Tenn.
Williamson, Mrs. Kathryn, Walnut Creek, Calif.
Williamson, Mrs. Mary Ella, Wilson, N.C.
Willie, Leslie K., Gooding, Idaho
Willis, Arthur, Berkeley, Calif.
Willis, Carol C., Long Beach, Calif.
Willis, Mrs. George, Lakewood, Ohio
Willis, Mrs. Shirley, Bronx, N.Y.
Wills, Robert C., Olathe, Kans.
Wilson, Mrs. Betty, Bloomington, Ill.
Wilson, Mrs. Charline, Knoxville, Tenn.
Wilson, Mrs. Frances, Staunton, Va.
Wilson, Mrs. G. I., Salem, Oreg.
Wilson, Grace, Rome, N.Y.
Wilson, James, Little Rock, Ark.
Wilson, Mrs. Joyce, Walker, La.
Wilson, Kenneth L., Jacksonville, Ill.
Wilson, Mrs. Laverne, San Antonio, Tex.
Wilson, Mrs. Lynn D., Spartanburg, S.C.
Wilson, Mrs. Marie, Berkeley, Calif.
Wilson, Natalie, Holland, Mich.
Wilson, Mrs. Patricia, Baton Rouge, La.
Wilson, Mrs. Rae E., Indianapolis, Ind.
Wilson, Sylvia E., Monroeville, Pa.
Wilton, Mrs. Mae, Baton Rouge, La.
Wiltse, Mrs. Frances, Devils Lake, N. Dak.
Wiltse, Lyle A., Devils Lake, N. Dak.
Winter, Mrs. Pauline, Fulton, Mo.
Wingo, Mrs. Annie C., Spartanburg, S.C.
Winifred, Sister Denise, Randolph, Mass.
Winsett, Ann, West Covina, Calif.
Winter, Mrs. Dorothy, Cedar Falls, Iowa
Winter, Sister Phyllis, Chicago, Ill.
Wischmeyer, Judith, Locust Valley, N.Y.
Wisner, Mrs. Joan, New York, N.Y.
Wisnieski, Ann Marie, Dodge, Nebr.
Wisser, Mrs. Margaret S., Salem, Oreg.
Wissman, Mrs. Karen, Rochester, N.Y.
Witczak, Mrs. Betty, Riverside, Calif.
Witherell, Joyce S., Riverside, R.I.
Withrow, Mrs. Margaret S., Lanham, Md.
Witt, Mrs. Therese, Stevens Point, Wis.
Woebke, John, Staunton, Va.
Woerner, Mrs. Mary, Great Falls, Mont.
Wofford, Mrs. Martha J., Galveston, Tex.
Wolach, Marvin, Santa Fe, N. Mex.
Wolf, Donna, Oxon Hill, Md.
Wolfe, Mary, St. Augustine, Fla.
Wolff, Louise, Sulphur, Okla.
Wolff, Sydney, Perry, N.Y.
Wollaston, Roy A., Milton, Ont., Canada
Wollenweber, Mrs. Marilyn K., Fountain Valley, Calif.

Wonder, Guy, Vancouver, Wash.
Wong, Mrs. Fran, Phoenix, Ariz.
Wood, Mrs. Charlotte, Newcastle, Okla.
Wood, Christine L., Mystic, Conn.
Wood, David, Falmouth Foreside, Maine
Wood, Eugene, Newcastle, Okla.
Wood, Mrs. Gladys, Knoxville, Tenn.
Wood, Mrs. Margaret K., Douglas, Alaska
Wood, Marvin, Little Rock, Ark.
Wood, Mrs. Thelma H., Lomita, Calif.
Wood, Wilbur, Knoxville, Tenn.
Wood, Mrs. Wilma, Rochester, N.Y.
Woodburn, Mrs. Don, Lincoln, Nebr.
Woodby, Ronald D., Morganton, N.C.
Woodruff, Irvan L., Orinda, Calif.
Woodrum, Mrs. Dorothy, Staunton, Va.
Woods, Brenda, Del Valle, Tex.
Woods, Mrs. Lucie S., Romney, W. Va.
Woodson, Winifred L., Charlottesville, Va.
Woodward, Jean, Buffalo, N.Y.
Woolley, Mrs. Shirley, Riverside, Calif.
Wooten, Farris, Woodward, Okla.
Word, Muriel, Houston, Tex.
Wrathall, Mrs. Gloria, Hillsborough, Calif.
Wright, Mrs. Avis, Staunton, Va.
Wright, Dwight T., Morganton, N.C.
Wright, Mrs. Evelyn N., Jacksonville, Ill.
Wright, Hal, Wilson, N.C.
Wright, Lynda, Oklahoma City, Okla.
Wright, Mrs. Mary F., Sterling Heights, Mich.
Wright, Velma M., W. Hartford, Conn.
Wuescher, Peter A., Metairie, La.
Wukadinovich, Mrs. Elodie, Riverside, Calif.
Wukadinovich, Michael, Riverside, Calif.
Wyks, Hollis, Lambertville, N.J.
Wyks, Mrs. Margaret, Wilmington, Del.

Y

Yacobacci, Mrs. Pat M., Dallas, Tex.
Yancy, Vickie, Oak Park, Ill.
Yannacone, Mrs. Constance, San Francisco, Calif.
Yarbro, Mrs. Fay, San Antonio, Tex.
Yates, Mrs. Belle, Staunton, Va.
Yates, Fred, Staunton, Va.
Yelverton, Mrs. Norma, Wilson, N.C.
Yenkin, Linda, Cambridge, Mass.
Yoder, Milton, Staunton, Va.
York, Mrs. Dian, Memphis, Tenn.
York, Mrs. Janet A., East Haven, Conn.
York, Wayne, Little Rock, Ark.
Young, Alice, El Cerrito, Calif.
Young, Dr. C. Ellery, Monmouth, Oreg.
Young, Mrs. Elizabeth, Rome, Ga.
Young, Mrs. Ellen B., Pittsburgh, Pa.
Young, George B., New York, N.Y.
Young, Sister Loretta, Buffalo, N.Y.
Young, Marilyn E., Amherst, Nova Scotia, Canada
Young, Michael L., Morganton, N.C.
Young, Sister Virginia, Buffalo, N.Y.
Young, Mrs. Willa L., Oakland, Calif.
Youngelson, Ellen, New York N.Y.
Youngers, R. T., Sulphur, Okla.
Youngers, Mrs. Retta T., Olathe, Kans.
Youngs, Joseph P., Portland, Maine
Yust, William F., Fishers, N.Y.

Z

Zadek, Mrs. Carol, Westbury, N.Y.
Zagata, Robert, Vacaville, Calif.
Zalkin, Fran, Boston, Mass.
Zaversnik Phullis, Denver, Colo.
Zawolkow, Esther G., Rossmoor, Calif.
Zehr, Rachel, Normal, Ill.
Zemalis, Charles J., Berkeley, Calif.
Zenor, Jerry W., Ardsley, N.Y.
Zibman, Diantha, Philadelphia, Pa.
Ziegler, E. Eugene, Cave Spring, Ga.
Ziev, Mrs. Bebe, Melrose Park, Pa.
Ziev, Joel D., West Hartford, Conn.
Zieziula, Frank R., Rochester, N.Y.
Zimmerman, Mrs. Maria Elena, Centereach, N.Y.
Zimmerman, Mrs. Mildred S., Hagerstown, Md.
Ziprick, Harold, Calgary 48, Alberta, Canada
Zito, Mrs. Lynn, Arlington Heights, Ill.
Zollec, Mrs. Olive, Winnetka, Ill.
Zook, George A., Jacksonville, Ill.
Zuehl, Ronald W., Indianapolis, Ind.
Zugner, Penelope Ann, Rome, N.Y.
Zuhn, Rev. Donald W., Aurora, Colo.
Zwanck, Shirley, Yuba City, Calif.
Zwick, Leonard G., Rochester, N.Y.
Zwieg, Mrs. Virginia, Wauwatosa, Wis.
Zwierko, Mrs. Cherryl S., Reston, Va.
Zwillenberg, Mrs. Edith, New Rochelle, N.Y.

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Mrs. Jean Boles—Louisiana
Melvin Brasel—Minnesota
John Caple—Georgia
Philip Cronbund—American (Connecticut)
Sue Dement—Minnesota
Patrick Dowling—South Carolina
Lloyd Graunke—Tennessee
Harry Hall—Illinois
Gertrude Hanes—W. Pennsylvania
Allen Hayck—North Dakota
Ralph Hoag—New York (Rochester)
George Houk—Indiana
Lucy Lewis—California (Riverside)
James Little—New Mexico
Colin McAdams—Minnesota
Winfield McChord—Kentucky
William McClure—Florida
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Lloyd Parks—Kansas
Hugh Prickett—Mississippi
Stanley Roth—Kansas
H. G. Royall, Jr.—North Carolina
Polly Shahan—Gallaudet
Eldon Shipman—West Virginia
John Shipman—Virginia
Fred Sparks—American (Connecticut)
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Eve Dicker—Wisconsin
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Paul Peterson—NTID
Susan Rose—NTID
Pauline Stone—Mississippi
James Titus—NTID
Connie Barnes—Alabama
Richard Reed—Missouri
Ricardo Gonzales—California, Riverside
Mary Ann Royster—Kentucky

SECTION LEADERS

Audiologists, Dr. Jerome G. Alpiner
Coaches & Physical Education, Mr. Warren Fauth
Communication, Dr H. W. Barkuloo
Contributed Papers, Dr. William N. Craig
Curriculum, Dr. Doin Hicks
Day Programs, Dr. John D. Harrington
Educational Media, Dr. Gilbert Delgado
Federal Programs, Dr. Frank Withrow
Library, Mrs. Anna Huff
Mathematics, Mr. John Kubis
Multi-handicapped, Dr. J. G. Demeza
Post Secondary Programs, Mr. Robert Lauritsen
Pre-School, Dr. Freeman McConnell
Principals & Supervising Teachers, Mr. Winfield McChord, Jr.
Reading & Language, Mr. Kenneth R. Lane
Teacher Preparation, Mrs. Marlyn O'Neill
Vocational Education, Mr. Hollis W. Wyks

SECOND NATIONAL MEETING OF THE PARENTS SECTION
OF THE
CONVENTION OF AMERICAN INSTRUCTORS
OF THE DEAF
ARKANSAS SCHOOL FOR THE DEAF, LITTLE ROCK

June 25, 26 and 27, 1971

PROGRAM

Friday, June 25

3:00 p.m.—Registration.
7:00 p.m.—Social—Sponsored by the Arkansas PTCA. Film—"Never to Hear the Wind."

Saturday, June 26

8:45 a.m.—Opening Session—Mr. Roy K. Holcomb, Chairman CAID Parent Section, presiding.
Invocation—Rev. Robert E. Parrish, Little Rock.
Welcome—Dr. Kenneth R. Mangan, President CAID.
Introductions
Keynote Speech: *"Educational Crises"*, Dr. David M. Denton, Superintendent, Maryland School for the Deaf.
10:30 a.m.—Business Session—Dr. S. D. Roth, Superintendent, Kansas School for the Deaf, presiding
Presentation of By-laws—Mr. Clyde Lee, Los Angeles.
1:30 p.m.—Second General Session—Mr. Roy K. Holcomb, chairman.
"Mythology and Denial in Deafness", Dr. McCay Vernon, Western Maryland College.
3:00 p.m.—Business Session—Mr. J. A. Little, Superintendent, New Mexico School for the Deaf, presiding
Election of Officers.
6:30 p.m.—Banquet—Hostess, Mrs. Mary J. Rhodes.
Address—*"These Times"*, Mr. Rance Henderson, Superintendent North Carolina School for the Deaf.

Sunday, June 27

8:30 a.m.—Third General Session—Discussion Groups

Leaders

1. *Fundraising*—Mr. John Locke, Takoma Park, Md.
2. *Legislation*—Mrs. Mary J. Rhodes, Greenbelt, Md.
3. *Organization*—Mrs. Dolores Yowell, Lombard, Ill.
4. *Federal Services*—Dr. Frank Withrow, Washington, D.C.
5. *Vocational Rehabilitation*—Dr. Marshall S. Hester, Las Cruces, N. Mex.

10:30 a.m.—Panel Discussion (Group Leaders)—Mr. A. G. Norris, Moderator.
11:15 a.m.—Wrap-up Speaker—Mr. Malcolm J. Norwood, Education Officer, U.S. Office of Education.

KEYNOTE SPEECH—EDUCATIONAL CRISES

Dr. David M. Denton, Superintendent, Maryland School for the Deaf

There is a certain appropriateness in considering the whole question of Educational Crises at a National Parent Meeting. Indeed, in the opinion of many, including this speaker, the heart of the crisis in education is *in the home*. To consider adjustments in education designed to overcome these crises, without fully involving parents and the home, would be to divorce oneself from the reality of the problem and to consider only the symptoms.

There is also a certain urgency about this undertaking; an urgency heightened by the fact that as a nation, we are looking to our social institutions, primarily our schools, to provide us with a sense of upward, positive redirection. We dare not deny the fact that this is an era of crisis and we dare not despair in the presence of this hard reality. It seems almost paradoxical that often a moment of crisis is, indeed, a moment of *hope*. It is really a matter of perspective. A present hope lies in the fact that we are able to identify these crises in education and even to arrange them on the basis of priority, but this is not enough. We, must also provide alternatives. A whole generation of deaf children are out there somewhere depending on us. It is obvious to me, as I am sure it is to you, that the quality of education and indeed the quality of life of this same generation of deaf persons, is being, to a large degree, determined on the basis of what we do here this week. There is no time for dilly, dallying . . . let this be *our moment of truth*.

I know of no better way to identify crises, to establish priorities and to offer alternatives, than to do so by calling upon personal experiences and to use, as a point of reference, the Maryland School for the Deaf.

1. The Communication Crisis

Since communication is a process which involves the whole human person, and since communication is fundamental to normal human development, it becomes priority number one. Deaf children achieve, learn, contribute and succeed on the basis of their ability to interact meaningfully with other persons in the environment and with the environment itself. To put it succinctly, communication involves *people interacting freely with people*. If we can accept this premise, then it becomes apparent to us that indeed we have a crisis in communication in the education of deaf children. Far too many educational programs endorse and employ restictive modes of communication which reduce the quality of child—child interaction to an almost primitive level. We might as well be frank about this. Communication skills . . . language skills evolve and expand through usage. This is a generative quality in language which cannot be denied nor ignored. None of us learn language by being taught language. We, instead, learn language by freely using it with our peers, by experimenting with it and by measuring it against that of our adult models . . . our parents. It must be pointed out that we were not only permitted to do this but encouraged to do it without prejudice. Now, how much language can young profoundly deaf children be expected to learn from each other when their communication efforts are limited to speech and speech-reading? Have you ever observed two five year old congenitally deaf children engage in meaningful conversation through speech and speechreading? This question would be almost ridiculous if it were not so tragic.

The Maryland School for the Deaf fully embraces the concept of Total Communication for all deaf children. By Total Communication is meant the *right* of a deaf child to learn to use all forms of communication available to develop language competence at the earliest possible age. This implies introduction to a reliable receptive-expressive symbol system in the preschool years between the ages of one and five. Total Communication includes the full spectrum of language modes: child devised gestures, formal sign language, speech, speechreading, fingerspelling, reading and writing. Every deaf child must have the opportunity to develop any remnant of residual hearing for the enhancement of speech and speechreading skills through the use of individual and/or high fidelity group amplification systems.

We are beginning to see dramatic changes among our upper-primary students who are 9, 10, and 11 years of age. Most of these students have now had two or three years of a Total Communication Program. Traditionally, reading comprehension levels for this age group have been around second grade and we have had to settle for increments of a half grade or a .5 gain per year. In this group of approximately 40 students we are seeing many more children achieve a reading comprehension level greater than 2.5 grade levels. Almost two-thirds or 61 per cent of this group scored higher than 2.5 in reading comprehension on the May 1971 achievement tests. These students were measured on the Gates MacGinitie Reading Tests. Even more interesting perhaps is the observation that 46 per cent of this group scored 3.0 or better, while 23 per cent scored 3.5 or better and 10 per cent scored above 4.0.

The increment from September 1970 to May 1971 was equally heartening. Nearly one half of this group or 43 per cent made at least a full grade level gain. This is much higher than we had anticipated. We attribute much of this growth to . . . better communication on all sides . . . exchange of ideas, etc., but more basically to signs which serve as the building blocks upon which the congenitally deaf child can develop his own linguistic base.

We are finding that the knowledge of signs spills over into speech and speech reading as well as syntax.

A recent classroom incident illustrates the positive influence of manual communication on speech production of young profoundly deaf children. While visiting a class of primary children recently, a seven-year-old girl approached me and told me that she would like to do a poem for me. The teacher told her to go ahead and do the poem but to remember the final "g" sound in the word flag and the final "d" sound in the word red. The child smiled and indicated that she would try to remember these sounds. She then turned to me and signed and said simultaneously . . . "We love our flag" (as she signed flag she ended the graceful movement of her right hand by assuming the g formation. This act seemed to provide visual as well as kinesthetic monitoring for her own speech production and she was able to produce a very good "g" sound), "of red and white and blue". As this young girl signed and said the word red, her index finger moved downward and outward from her lips and her right hand assumed formation "d" of the manual alphabet. Again being able to use her hands seemed to provide her with the necessary feedback to aid in the development of the rather difficult "d" sound. Of course, not to be overlooked is the fact that this little child did this whole poem using Total Communication and with full understanding as to the meaning of the poem itself. In considering the above statements, keep in mind the fact that the key to this kind of program is the unstructured (meaning no classroom drill) randomized but highly personalized and therefore relevant dialogue between child and adult and child and child.

The Total Communication system is employed throughout our school program from preschool through high school. Since we recognize that communication begins in the home and involves the parents and whole family, we have had to face up to our responsibility to teach the parents how to communicate. At present we have eight regional parent communication classes in the various cities and towns across our State. These classes are taught by staff members from the Maryland School for the Deaf . . . both hearing and deaf persons. It will interest you to know that these parent communication classes have reached approximately three fourths of our families (siblings of our deaf children are also involved in classes). It will also interest you to know that our teachers and teacher aides have voluntarily given up their evenings and nights, without pay, in order to make a contribution to parents and in the final analysis, to the deaf children. Since school opened last September, our staff members have driven over 25,000 miles at night, explaining the concept of Total Communication to our parents and providing them with the necessary skills. The importance of parental response to this kind of effort must be stressed. Unless parents are willing to support such a program, these efforts would be futile. So far, I can proudly say our parents have responded. This same kind of thing, ladies and gentlemen, can be done in other states, as well, and indeed *must be done.*

Before going to the next crisis, the fact should be mentioned that in our own school program we attempt to serve children and parents, not only at the Schol in Frederick but in the outlying communities as well on an itinerate basis. Here again, we teach parents how to communicate with their children, believing that if Total Communication is practiced in the home, the child will develop a much more normal language capability.

2. CRISIS IN FAMILY INVOLVEMENT

Perhaps it would shock you to realize that many deaf children have never had a satisfactory, truly, meaningful relationship with a hearing adult. You, of course, do not have to be reminded of the gradual deterioration of the quality of home life in our Country. A look at these two realities then brings us to a full awareness of the existence of this crisis in the home. Far too many parents of deaf children seem pathetically unable to deal constructively with their children's behavior and far too many deaf children harbor a feeling of burning resentment towards the family which has unwittingly perhaps, but blatantly shut them out. Deaf children are tired of being *non-participating, non-voting* members of the family. Deaf teenagers are tired of being handed a five dollar bill and the car keys by parents who do not even know the manual alphabet. It requires conscious effort on the part of the hearing members of the home to help the deaf child integrate fully into the family. As our parents learn to communicate with their deaf children, they frequently tell us such things as "Jimmy has joined the family". But, even more telling is the statement frequently made to us by young deaf children whose parents have learned to communicate. These little fellows quite regularly tell us "mother and daddy are deaf now". Perhaps now we can begin to appreciate the crucial importance of family involvement with the deaf child.

Our parent communication classes again have been extremely helpful in bringing the whole family together. During the summer months, we urge the whole family to come to the communication classes and this includes the deaf child or children. In such cases we keep the classes relaxed and frequently use the deaf students as resource persons or teachers' helpers. As you can see, this provides not only an opportunity for interaction, but in addition it provides an opportunity for the deaf child to have status and to play a role of importance.

In our program with Western Maryland College, we asked for and obtained, the College's permission to enroll parents of deaf children and siblings of deaf children in a manual communication class being offered to college students. This effort turned out to be highly successful. The youngest member of the class was a ten year old girl and the oldest member was a sixty-nine year old mother. This class was taught by a deaf teacher and a hearing teacher. Many of the class sessions were conducted on our campus in the dormitory so that face to face communication could occur with real live deaf children. This pattern has been continued in subsequent classes.

Our Parent Teacher Counselor Association has played a very active role in promoting the parent communication classes in an effort to improve family relationships. Our PTCA is now scheduling regular meetings of parents with representatives from the School to discuss this question of parental responsibility and family involvement. Parents in the audience, I cannot overstress the importance of your making your deaf child a real member of the family.

3. Crisis in Morality

If asked what my biggest concern for the future was, I would have to answer that it involves the growing insensitivity to the need for the nurturing of our children's spiritual needs and the seeming unwillingness of our social institutions to provide our children with a set of moral, religious and social values sufficient to sustain them during times of personal crisis, and sufficient to prepare them for a life of responsible service to other people. It seems that there is a tendency on the part of adults to timidly retreat from these areas of responsibility, or to simply ignore the fact that children must develop as total persons and that the moral, and spiritual dimensions cannot be overlooked. As some one recently pointed out, it seems almost paradoxical that in this era when we are so concerned about ecology and the indignities rendered our environment, that we could be so insensitive, so dulled, to the needs of the spirit. I am worried about the *pollution of our social-moral environment.*

It is my honest belief that Total Communication will spread all over our Country, but mothers and daddies, how empty this movement would be if we ignored our responsibility to help our children develop a *conscience*. I am not sure that I am really able to offer alternatives in the face of this crisis, but I am willing to say to the parents in this audience and to parents all over America that the responsibility rests squarely upon our shoulders to provide the foundation for moral and spiritual development for our deaf children through *active teaching and example*. I am also willing to say that the school your child attends is unable to do it alone. This is an area of responsibility where the school and the family must work hand in hand.

Attitudes and values are learned. The concept of justice for example begins to develop early and it becomes a family responsibility to provide the opportunity.

4. CRISIS IN TEACHER EDUCATION

For several years the education of the deaf has suffered a shortage of well qualified teachers. This problem was recognized by the Federal Government in the early 60's and appropriate legislation was enacted which provided federal funding for training centers for teachers of the deaf. Several new programs sprang up at various places across the Country, but even today, the shortage of well trained teachers of the deaf continues. The emphasis over the past ten years has been related more perhaps to *quantity than to quality*. Teacher preparation in the area of the deaf has become more and more university centered. There is nothing wrong with large universities, obviously, but the point is that in this trend toward the development of university centered training programs, programs for the deaf and indeed, deaf children have somehow become quite remote from the training process. Teacher preparation centers all across our Country have tended to embrace the same rigid communication philosophy discussed in Crisis Number One. There has certainly been an increase in the number of teachers moving into classrooms for the deaf from these training centers, but there has not been a recognizable shift in educational philosophy brought about as a result of improved teacher education. Far too many teacher training centers provide little or no opportunity for involvement with parents or members of the deaf community. It is not unusual to find directors of programs for the preparation of teachers of the deaf, unable to communicate with deaf persons. Many training centers for teachers of the deaf have made it a practice to exclude deaf persons. So much for the problem . . . the important thing is what can we do about it.

Four years ago when I became Superintendent of the Maryland School for the Deaf, we faced a serious shortage of qualified teachers with the opening of the school just mere weeks ahead. There was no other choice than to develop our own in-service training program. This we recognized as only a temporary measure, so the development of a full scale teacher preparation program somewhere in the State became a high priority item. Today in Maryland, an unusual teacher preparation program exists. Western Maryland College and the Maryland School for the Deaf have jointly developed a teacher preparation program . . . one which is based upon the concept of Total Communication and upon the concept of a sharing and pooling of resources by the institution of higher learning and the practicum facility. The College and the School for the Deaf enjoy a relationship of mutual respect and mutual need. The strength of the College's commitment to this new program and the Total Communication concept upon which it was founded, was sufficient to attract Dr. McCay Vernon, an outstanding Research Psychologist, to the Western Maryland Campus. In addition to Dr. Vernon, this program has attracted other capable educators of the deaf and is now receiving funding from the Federal Government. This is the only preparation program in America which enjoys the endorsement of the National Association of the Deaf. Either deaf or hearing applicants are accepted into the program and a good share of the teaching is done by deaf faculty members. This is the same program mentioned earlier in this paper, the one which involves parents in the communication classes.

Since the very beginning of the Western Maryland College-Maryland School for the Deaf affiliation, our parents have played an active role. This Spring, for example, there was a Bill before the Maryland General Assembly to establish Scholarships for Teachers of the Deaf. Our parents through organized efforts and through individual efforts helped insure the passage of this Bill. Our parents simply flooded the State Legislature with telephone calls, and letters in support of this Scholarship Bill. Without the collective and individual support of our parents, it is doubtful that this Bill would have passed. It becomes apparent then, that parents do have a great deal of power which can be exercised to bring about constructive change in the education of deaf children. Other examples of the use of political power by parents will be mentioned later.

5. CRISIS IN CURRICULUM

Some persons would quarrel with my sense of priority and suggest that the matter of curriculum be given top consideration and "prime time", so to speak. It is not that I assign low priority to curriculum. It is instead that curriculum adjustment is an exercise in futility unless these first four crises have been dealt with adequately. Over the past fifty years, there have been great strides forward made in the areas of curriculum design and development, but there has been a noticeable lack of parallel progress in the educational achievement of our deaf children.

There is a second reason why the matter of curriculum is being considered now rather than earlier in the paper and that is that I want all of us to begin to consider curriculum in terms of the child's total life experiences including not only the school but more importantly the home. If the problems of communication, family involvement, moral and spiritual development and the preparation of professional personnel are properly attended to, then the problem of curriculum becomes less critical. In traditional educational programs for deaf children, there has seemed to be an unspoken, perhaps, but well practiced belief that deaf children learn from the teacher. This attitude accounts for the highly structured nature of many school programs for deaf children. This approach tends to over-emphasize teaching and under-emphasize learning. Perhaps the assumption is that the two can be equated. Teaching and learning, however, are not synonymous. Perhaps the point I am trying to make can best be illustrated by a remark made by someone else. This gentleman after studying the design of a new educational program, remarked that it was built more around prescriptive teaching than around individual learning. Learning is a highly personal matter.

In an atmosphere that encourages free and honest self expression and full participation by all persons involved, deaf children will, through interaction, experimentation, trial and error, not only develop *but thrive*. Ladies and Gentlemen, this begins and continues at home.

6. Crisis in Educational Programs

The past twenty years have seen dramatic growth in the school age population of deaf children. Coat tailing this population explosion has been a proliferation of local classes for "hearing impaired" children. Obviously, many of these new programs were needed, but the problem has been that they sprang up willy nilly with a shocking absence of proper educational design and State wide planning. This uncontrolled, unplanned burst in the establishment of local day classes has been, to a large degree, responsible for two major problems facing the education of the deaf today. The first of these problems is that as these local classes sprang up, they frequently did so by adopting a private oral school educational philosophy and with a poorly defined population of hearing impaired children having a wide range of abilities and educational needs. These classes, even though they have espoused the concept of integration of the deaf child into the "hearing world", have remained provincial in terms of educational philosophy and often completely out of touch with the adult deaf community.

The second problem is a direct outgrowth of the first one and that is that an ever increasing number of deaf children have failed because of the narrow based restrictive philosophies of these programs, and have been indiscriminately dumped on the State residential schools for the deaf.

This practice has served to perpetuate the existence of inappropriate local programs and has seriously crippled the State schools who seem to have no choice but to enroll these children. It would seem to me that there is an obligation on the part of those persons administering State schools for the deaf to assume positions of aggressive leadership and to fight for a comprehensive network of educational services having *continuity*, *permanence* and *stability*. It would seem further that the school's obligation also includes the provision of these services from infancy into adulthood including parent education and that such services must be based upon a concept of total involvement and Total Communication.

The Maryland School for the Deaf has long faced an enrollment problem . . . the School not only has been unable to accept all applicants for admission at the preprimary level, but has, in addition, been placed under increasing pressure to accept growing numbers of children who have already failed in local classes. These and similar problems have been faced and are now being faced by many of our schools across the Nation. We, at the Maryland School, interpreted our responsibilities in the following manner.

First, it seemed mandatory that we maintain a legitimate high quality program for deaf children from the preschool level through the secondary level, and *Second*, that we expand our programs so as to be able to, at least, minimally meet the enrollment demand. This expansion, we felt should occur not only on the campus in Frederick but through the establishment of a second campus as well, near the population center of the State. The plan also called for the establishment of satellite preschool parent counseling services in the local communities, sponsored and administered by the Maryland School for the Deaf. The long range plan also called for the establishment of a teacher preparation program which has already been mentioned.

In 1968, the School was successful in getting legislation introduced which would establish the Columbia Campus of the Maryland Schol for the Deaf, to be built between Baltimore and Washington, D.C., in the densely populated suburban area. Our parents, alumni, organizations of the deaf and individual members of the deaf community were of unusual help in getting this legislation passed. The Columbia Campus of the Maryland School for the Deaf has already been funded and construction is scheduled to begin immediately with an opening date set for September 1972. This beautiful new school will provide services for up to fifty children and their parents at the preschool level, an elementary and intermediate program and a separate self contained unit for multi-handicapped deaf children. Columbia Campus will be both day and residential.

As the Columbia Campus is being developed, the main campus in Frederick is in the midst of a massive building program which will push the enrollment capability from 340 to approximately 475. It is estimated that within the next five years, the Maryland School for the Deaf, on its two campuses, will be able to serve over 725 deaf children and their parents. For families living too far away to benefit from the preschool programs on a commuting basis, our School will continue to send a team into the local communities and provide these services close to home.

Ladies and Gentlemen, perhaps these are ambitious goals, but I really do not think we have any choice.

References made in this paper to the Maryland School for the Deaf were done so only for the purpose of illustration. Obviously, we are extremely proud of our School and of our parents, but we would not for a moment pretend that we do not have our own problems. But, it is not how many or how few problems one has that matters, but how one deals with them.

BUSINESS SESSIONS—JUNE 26

MORNING SESSION

The first Business Session of the 1971 meeting was called to order by Dr. Stanley D. Roth to receive a presentation of bylaws proposed for the permanent Parent Organization to be established during the present convention. The presentation was made by Mr. Clyde Lee of Los Angeles, California.

The bylaws were explained section-by-section. After much discussion and many abortive attempts to amend the bylaws from the floor, a committee composed of Mrs. Alice Tinsley (Indiana), Mr. James Morris (Missouri), and Mrs. Barbara Stoops (North Carolina), Chairman, was appointed to receive suggested amendments and to propose changes to the membership for consideration and disposition via a mail ballot. The bylaws, as presented, were adopted subject to amendment by mail ballot.

AFTERNOON SESSION

Mr. James A. Little presided at the second business session called to elect officers for the ensuing two years. The Nominating Committee presented a slate of officers which was not supported by the membership. Nominations from the floor resulted in the election of the following officers:

President, Mrs. Lee Katz, Silver Spring, Maryland
President-Elect, Mr. Larry Newman, Riverside, California
1st Vice President, Mrs. Jane Grisham, Doraville, Georgia
2nd Vice President, Mrs. Carol L. Schweiger, New Brighton, Minnesota
Secretary-Treasurer, Mrs. Shirley Hooper, Santa Fe, New Mexico

MYTHOLOGY AND DENIAL IN DEAFNESS

Dr. McCay Vernon, Western Maryland College

> "The great enemy of the truth is very often not the lie—deliberate, contrived and dishonest—but the myth—persistent, pervasive, and unrealistic."
> —**President John F. Kennedy, Yale Commencement, 1962.**

Although the field of deafness has its share of deliberate lying and dishonesty, this is *not* the major difficulty. The *real* problem rests with the mythology in deafness which is persistent, pervasive and unrealistic, and even more importantly with the psychological needs in professionals and parents which creates the mythology. Only by understanding the process underlying the need for and development of the myths can we effectively alter what is happening. The process is psychologically complex, but can be examined by looking at what is called the copying mechanism of denial.

DENIAL

The first reaction to most psychologically traumatic events is to deny them. Let's consider some examples of this.

Some time ago my wife had a lump appear on her breasts. Because my wife is deaf I went with her to see the doctor. One of the first questions he asked was how long has the lump been there. When she replied several months, I was appalled and angry. It was inconceivable to me that a person with my wife's background as a hospital microbiologist familiar with the symptoms, its implications, and the importance of early treatment could conceivably wait so long before going for treatment.

After this visit, I went back to the physician to talk about what had happened. In the discussion he explained that the average time between when a woman notes a lump on her breast until she reports it is six months.

The question then becomes "why?" The reason is that a discovery of a lump on the breast is traumatic and life threatening. Therefore, the initial reaction to it is *denial*. The fantasy is that it will go away. Only when the lump persists, and perhaps enlarges, does the reality of the situation become so overwhelming that the woman will go to the doctor. In some women this kind of self destruction behavior persists for years until treatment is no longer possible. We do the same thing with deafness.

Another example of the mechanism of denial occurs with parents of leukemic children. The initial reaction to finding that one's child has leukemia is to deny it, to say, "It can't happen to me." This initial denial is normal. However, as the disease progresses and the physical symptoms become increasingly visable, i.e. breathing becomes labored, hair falls out, etc. Denial then becomes impossible and reality is faced. The same thing occurs in deafness except that facing the reality of deafness offers hope and opportunity.

Many of us are old enough to have lost a parent by death. We remember that our initial reaction to this trauma was to deny it to say no it could not be. However, the reality of death is such that it cannot be denied for long. Deafness can be denied for years and even a lifetime.

DENIAL OF DEAFNESS

There are some very important parallels between the denial of cancer symptomtology, leukemia, and death and the myths that pervade the field of deafness. With deafness as with other psychological trauma, the initial reaction to an infant's deafness is denial. The typical response is "Oh no!", "Why me?", or "It can't be."

Once this initial denial goes away a far more *subtle* and insidious denial tends to develop. Usually the audiologist, doctor, speech therapists and educator participate in it and encourage it. The essence of this subtle denial is exemplified by statements such as, "My child is just like any other child except that he is deaf," "Beethoven was deaf," "He is deaf, but with a hearing aid and with lipreading lessons he will be able to communicate like hearing children" (i.e. he will not be deaf).

The point to be made is that while the deafness itself is no longer denied all its implications are. This occurs in part because the denial of deafness is relatively easy compared to the denial of other conditions such as cancer, leukemia, and death because deafness takes much longer to become fully "visible." You can hardly tell at all until a child is two or three years of age. With beginning school or preschool activities of speech lessons, rhythm band, auditory training, etc, the denial by professionals and parents tend to persist. Finally as the youth reaches his teens or early adulthood uneducated, unable to communicate, frustrated, isolated, and rejected by hearing peers we usually stop denying his deafness and just give up.

The damage has been done. Irretrievable years have been lost. What could have been a rich rewarding experience of parenthood and family life is instead an unfulfilled, discouraging experience involving unnecessary grief and disappointment.

THE MYTHS

Thus far this paper has been an effort to establish some of the strong psychological needs and dynamics that underlie the myths created to deny the implications of deafness. Contributing to the denial in a secondary way is the early invisible of deafness. Now let's look at some of the myths created.

First Myth—We have done a Good Job of Educating Deaf Children. As Table 1 shows, 30 percent of deaf children leave school at age 16 or older functionally illiterate. Sixty percent leave having achieved at fifth grade level or below, and only 5 percent attain tenth grade level. Most of this 5 percent are hard of hearing or became deaf in later life.

From the age of 10 to the age of 16 years the average gain in reading on standardized achievement tests is 8 months. At age 16 the mean reading test score of deaf youth is grade level 3, 4.

TABLE 1.—STUDIES ON THE EDUCATIONAL ACHIEVEMENT OF DEAF CHILDREN

Investigator	Samples	Results
Boatner (1965), and McClure (1966)	Ninety-three percent of deaf students in United States, age 16 years or older.	1. Thirty percent functionally illiterate. 2. Sixty percent grade level 5.3 or below. 3. Only 5 percent achieve at tenth grade or better and most of these are deaf or hard of hearing.
Wrightstone, Aronow, and Moskowitz (1962)	Seventy-three school programs for deaf representing 54 percent of deaf school children, ages 10 to 16.	1. Average gain in reading from age 10 to age 16 less than 1 year (0.8 months). 2. Average reading achievement of 16-year-olds was grade level 3.4. 3. Eighty percent of 16-year-olds were below grade level 4.9 in reading.
Schein and Bushnaq (1962)	Gallaudet College population and estimates of other deaf college students.	1. 1.7 percent of deaf school age population attend compared to 9.7 percent of hearing school age population.
Babbidge Report (1965, p. 23)	Two hundred sixty-nine schools and classes 23,330 deaf children. 76 percent of deaf school-age children (90 percent of residential school pupils and 57 percent of private residential pupils. Day classes and school not represented).	1. Median average on Stanford of school leavers is 5.9. 2. Thirteen percent of students "left" at age 16 or before. 3. About 3 percent were denied admission. 4. Waiting list for residential schools was 3.6 percent of enrollment, for private school 48.5 percent.

Table 2 shows that from the age of 7 until the age of 10 the average deaf child only advances 3 months in reading achievement. By age 15 when the average hearing child is reading at the ninth or tenth grade level the average deaf child has achieved a third grade level. Finally, at age 17 or 18 the typical deaf youth leaves school as a fourth grade reader.

TABLE 2.—MEAN GRADE LEVEL OF STUDENTS WITH 60db (ISO) OR GREATER HEARING LOSS. ACADEMIC ACHIEVEMENT TEST PERFORMANCE OF HEARING IMPAIRED STUDENTS U.S.: SPRING, 1969. OFFICE OF DEMOGRAPHIC STUDIES, GALLAUDET COLLEGE, WASHINGTON, D.C.

Test battery	Reading Age											
	7	8	9	10	11	12	13	14	15	16	17	18
Primary I	1.65	1.87	1.91	1.97	2.04							
Primary II				2.38	2.50	2.41	2.51	2.44				
Intermediate I						3.41	3.46	3.33	3.33	3.35		
Intermediate II							3.97	4.31	4.24	4.17	4.02	

These facts and the other data in Tables 1 and 2 stand in sharp and disgraceful contrast to the fact that deaf children have the same IQ as hearing children. Obviously, something is drastically wrong.

Second Myth—The Use of Fingerspelling and the Language of Signs Will Impair Academic Achievement. Table 3 shows clearly that children who have had deaf parents and who use fingerspelling and the language of signs do far better in reading, mathematics, and academic work in general than do children who have been limited to just "oral" communication. Despite this established fact the overwhelming majority of deaf children continue to be limited to "oralism" in their educational programs.

Third Myth—Sign Language Will Cause Deaf Children to Develop Poor Habits of Expressive Language. Once again the data in Table 3 indicates conclusively that the written language of deaf children who had early exposure to sign language and fingerspelling is superior to that of those who have been limited to "oralism". These findings are yet to be fully implemented in Maryland or in the rest of the nation. However, the Maryland School for the Deaf is pioneering in this area and providing national leadership. Superintendent, David Denton, of the Maryland School deserves the highest of commendations for his courage and efforts in this direction.

Fourth Myth—The Use of Fingerspelling and the Language of Signs Will Negatively Effect Speech and Lipreading. The overwhelming majority of the studies done have shown there is no difference in speech intellibility of deaf children who used sign language and fingerspelling and those who did not (Table 3). The differences in lipreading which do occur favor children who had early manual communication not so called "oral" children.

Fifth Myth—There Are People Who Advocate "Manualism." There are no advocates of "manualism" nor are there persons who oppose the teaching of speech or speechreading. Those who support the use of total communication system involving speech, fingerspelling, amplification, sign language, lipreading, and writing are increasing in number because the factual data indicate total communication to be far superior for deaf children. People who try to ignore the data and advocate "oralism", in their desperation, label persons believing in total communication "manualist" in much the way Senator Joseph McCarthy used to call those who disagreed with him "Communists."

Sixth Myth—Most Deaf Children Can Learn Auditorially. The diehard "oralists" who realize the data clearly indicate a total aural-manual communication is the far superior educational approach to deaf children have come upon a new tactic of evading the issue. They claim that all of their children except a few can learn through hearing. This approach has been given the name aceupedics.

There are not many blind children who learn through vision and there are few deaf youth who learn through hearing. Those who have a vested stake in rigid oralism are now claiming their deaf children are hard of hearing or "hearing impaired." They claim that because a child can hear a fog horn or gunshot he is not deaf and that by hanging a hearing aid on him he will learn to understand speech which he cannot hear.

CONCLUSIONS

We could go on listing other myths, many of which are crucial but this is not nearly as important as tying the concept of the denial of deafness to the purposes of this CAID Parent Section. More specifically how do we overcome the myths in order that fact and reality, not mythology, will govern the education of deaf children.

Just as with the other more frightening and somewhat unfortunate examples of trauma such as death, cancer, the more visible we make deafness the less it will be denied and the less mythology that will develop. Instead of our present policy of keeping parents of deaf children from meeting and mixing with deaf adults we need to encourage it. Instead of ignoring important organizations of deaf adults like the National Association of the Deaf and the Council of Organizations Serving the Deaf we need to work with them. The CAID Parent section does this beautifully. We *make* deafness visible and we deal with it effectively when we utilize the total communication necessary to communicate with deaf persons.

A way to overcome the denial of deafness pervasive among speech therapists, audiologists, physicians, and teachers is bring before their attention the increasingly-overwhelming amount of data supporting total communication. As the facts continue to come forth, the possibility of denial diminishes for all but the most desperate.

In summary, the major point of all this leads to is that much of the irrationality, the mythology, and the tragic inappropriations of education and rehabilitation for deaf children and their parents comes from an encouragement of the need to deny deafness. Our efforts should be directed before parents and professionals as early in their parenthood or their training as possible.

TABLE 3.—RESULTS OF EARLY MANUAL COMMUNICATION

Investigator	Samples	Results
Meadow (1968)[1]	Fifty six deaf children of deaf parents (manual group) 56 matched deaf children of hearing parents (oral group).	1. Manual group better in reading (2.1 yrs.). 2. Manual group better in math (1.25 yrs.). 3. Manual group better in overall education achievement (1.28 yrs.). 4. Manual group better in social adjustment. 5. No differences in speech and lipreading. 6. Manual group better in written language.
Vernon and Kohl (in press).	Thirty two pairs of genetically deaf children matched for age, sex, and I.Q. Manual group had deaf parents, oral group had hearing parents.	1. Stanford Achievement Test Scores. (a) General average—Manual group better (1.44 years). (b) Reading average—Manual group better (1.39 yrs.). (c) Para. mean—Manual group better (1.57 yrs.). (d) Vocabulary—Manual group better (1.19 yrs.). 2. Written language—Manual group superior at .002 level of significance. 3. No differences in speech intelligibility, speech reading, or psychosocial adjustment.
Stuckless and Birch (1966).	One hundred and five deaf children of deaf parents (manual group) 337 matched deaf children of hearing parents (oral group).	1. No difference in speech. 2. Early manual group better in speech reading. 3. Early manual group better in reading. 4. Early manual group better in writing. 5. Early manual group possibly better in psychosocial adjustment.
Montgomery (1966)[2]	Fifty-nine Scottish children	1. Exposure to, use of, and preference for manual communication did not negatively affect speech or speech reading skills.
Stevenson (1964)	One hundred and thirty four deaf children of deaf parents (manual group) 134 deaf children of hearing parents (oral group).	1. Ninety percent of manual group did better than matched oral students. 2. Thirty-eight percent of manual group went to college versus nine percent of oral group.

Investigator	Samples	Results
Quigley and Frisina (1961).	Sixteen nonresidential deaf children of deaf parents (manual group) Sixteen nonresidential deaf children of hearing parents (oral group).	1. Manual group better in vocabulary, the speech reading and better in education achievement. Ora group better in speech.
Hester (1963)	Deaf children in New Mexico School for the Deaf. One group had fingerspelling beginning at school age, one group taught orally.	1. Fingerspelling group superior on standardized achievement tests.
Quigley (1969)	Sixteen orally educated deaf children matched with 16 combined orally and manually educated deaf children.	1. Combined manual and oral children did better in language, speech reading, and general academic, achievement.
Denton (1965)	The academic top 10 percent of deaf children ages 12, 15, and 18, from 26 schools for deaf. Manual group had deaf parents, oral group hearing parents.	1. Mean acheivement test score of manual group 8.2 of oral group 7.7.

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[1] The sample size varied some depending on variables measures.

[2] This study did not specifically involve preschool manual communication.

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THESE TIMES

Rance Henderson, Supt., North Carolina School for the Deaf

The omnipresence of time makes it difficult—perhaps impossible—to escape completely the various time-related stimuli which constantly bombard our lives. We rush about in various ways because we want to be on time; we encourage or threaten people by telling them that their time will come; we reminisce about the depression when times were hard; we have a favorite time of the year; I have told my children many times not to make too much noise on Saturday mornings; we are having a good time here in Arkansas; things often succeed or fail because of good or poor timing; most of us are equipped this evening with some sort of timepiece. Perhaps many of you are sitting here wondering what time you will get home tomorrow and if you will be bothered again next week by the company efficiency expert who will tell you how to make better use of your time.

Poets have often written about time. Shakespeare describes a time just right for action, saying that such action leads on to fortune. He believes that failure to act at the perfect time results in a life without real depth and happiness:

> There is a tide in the affairs of men,
> Which, taken at the flood leads on to fortune;

Omitted, all the voyage of their life
Is bound in shallows and in miseries.
On such a full sea are we now afloat,
And we must take the current when it serves,
Or lose our ventures.

How about these times for you as parents of hearing-impaired children? As parents, do these times create a tide in your affairs? Do they constitute a full sea on which you are now afloat?

You know from your experiences that to examine these times in reference to yourselves as parents of hearing-impaired children is to look at things more through a kaleidoscope than through a microscope or telescope—one does not see all good or all bad in these times.

We might recall the opening chapter of Dicken's *Tale of Two Cities:* "It was the best of times, it was the worst of times, it was the age of wisdom, it was the age of foolishness, it was the epoch of belief, it was the epoch of incredulity, it was the season of Light, it was the season of Darkness, it was the spring of hope, it was the winter of despair, we had everything before us, we had nothing before us. . . ."

These words were never more true than today. In our time many things are both good and bad, desirable and undesirable, constructive and destructive in effect. For example, we find it difficult to understand many of the attitudes of some of our young people, especially those who have been labeled "hippies." Yet we should be thankful to them for calling our attention to the need for more love among people and for pointing out the obvious tragedy we inflict daily upon our environment and ultimately upon ourselves.

The same is true in matters which relate to you as parents of hearing-impaired children. It would be difficult for you to enumerate many—if any—recent events, thoughts or discoveries which are totally good or bad in their possible implications and effects.

We have three options:

1. We can focus on the negative aspects;
2. We can become confused and completely alienated by the two-sided nature of things; or
3. We have the option of looking at the positives in the picture.

I would not pretend to have a completely accurate perspective on these things, nor do I present a list presumed to be inclusive in nature or agreed upon by all. However, there are some "positives" of these times which, in my opinion, are noteworthy and encouraging:

1. There is a wider use of rubella vaccine and other vaccines which curb the aural-impairing manifestations of childhood diseases, thus reducing the number of children whose hearing is impaired because of prenatal factors and childhood diseases. In the next few years there are likely to be breakthroughs in genetics which will further reduce the number of hearing-impaired children.

2. There is an increasing emphasis upon and a greater effectiveness in early identification of aural disability. This emphasis continues to produce early identification approaches such as hospital screening programs and the establishment of high-risk registries.

Greater effectiveness will be realized actively through mammoth but precise pre-school screening programs and passively through the extensive publicity attached to these programs.

3. There will continue to be substantial activity in regard to early intervention. This wholesome development is most encouraging in those instances where:

(a) The activity is more than a watered-down pre-school program;

(b) Those in charge of the early intervention activity recognize the acquisition of language as the paramount difficulty of the hearing-impaired; and

(c) Programs are built around a system of total communication which demonstrably results in better language and precludes inordinate amounts of time spent on problems which at best are peripheral.

4. Evaluational procedures have been enhanced to a marked degree. Federal monies have made it possible to initiate various programs concerning personnel, materials and equipment for evaluation purposes. They provide additional personnel and equipment for existing programs and facilities the establishment of new programs. These resources have enabled educators to grasp a clearer picture of the parameters of any given child. These same resources have made it possible for every hearing-impaired child to be evaluated with an ease and effectiveness previously unknown.

5. There are today many additional, legitimate alternatives for placement into educational programs. It is now possible for parents to choose from quality programs offered by residential and day-class or day-school programs. We have seemingly gotten beyond the myth that there is only one effective type of educational programming and, therefore, only one legitimate choice for placement. Breaking through this myth has encouraged the growth of a large number of good, local programs.

6. In addition to these favorable developments in prevention, identification, intervention, evaluation and placement there are exciting developments in education itself. It seems that we are being much more practical and realistic in many respects.

It is difficult to say exactly how this has come about. In some ways what has happened is comparable to the story about the emperor's new clothes:

> A "weaver" enters the emperor's city and tells everyone that he weaves the most beautiful cloth in the world, but that the cloth is visible only to those who are truly intelligent. This tale soon reaches the ears of the emperor, who is determined to have a suit made of this wonderful cloth. The contract is quickly made, and the work begins. Representatives of the emperor are sent to inquire about progress on the suit. They see nothing, but rather than admit that they are not truly inelligent, they bring back glowing reports of the suit. Finally, the suit is finished and presented to the emperor. He also sees nothing, but to hide his shame he rewards the weaver greatly and wears the "new suit" in a public parade. Everyone has heard of the marvelous material so the parade goes well until a small innocent child exclaims: "The emperor has no clothes on."

We educators have not been referred to as having on no clothes, but other things of an equally startling nature have been said sometimes by people possessing innocence like the little child who revealed the emperor's delusions. On other occasions the revelation of educational farce has come from people with fairly sophisticated designs in mind.

It seems to me that from these revelations have evolved several significant factors:

(a) Numerous and better programs of early intervention are developing. Many of these programs are designed perceptively inasmuch as they recognize the difficulty of acquiring language as being the real problem of deafness and they attempt to deal with this difficulty with an approach which is known to be effective. I refer, of course, to the total communication approach.

(b) Educators are becoming more mindful of the fact that the only legitimate educational activity is that which comes about after the parents, the students and school representatives have met and discussed the aspirations and abilities of the student, how these aspirations may be realized and how the student, the parents and the school can work together to utilize a variety of resources in realizing these aspirations and abilities.

(c) Educators are realizing that meeting a child's own particular, unique needs occurs as well—and perhaps better—within a broad flexibility as within a narrow rigidity. For example, many educators now realize that the best way of specifically meeting a child's communication need is in an environment which includes several types of communication. We are realizing to an increasing degree that the effective satisfaction of a child's *specific* educational needs might only come from a *broad* program which provides options along the way, i.e., a program with the flexibility to allow students to fall in and out and back in step for a variety of reasons.

(d) Educators are recognizing the importance of the family in the overall development of the child. They are taking steps to allow—even insure—family involvement, thereby attempting to provide for a home environment of communication.

(e) Educators are beginning to take advantage of the positive aid of their products and consumers. Sensitive programs no longer are spending grossly inordinate amounts of time striving toward goals which can be only partially gained even under the most optimum circumstances. Rather, they are spending more time emphasizing language, reading skills, work skills and attitudes—things which are really necessary to help the students become strong and sufficient individuals rather than a pale imitation of a hearing person.

(f) Finally, in this list of exciting educational developments, is the appearance of post-secondary educational opportunities—not only for deaf students but for their parents as well. Consider the post-secondary opportunities for hearing-impaired students at Gallaudet College, San Fernando Valley State College, National Technical Institute for the Deaf, Western Maryland College, Delgado Junior College, St. Paul Technical Vocational School, Seattle Community College, Riverside City College, and many others. Consider the recent indications that Gallaudet College will become active in a program of continuing education for a variety of deaf people in a multitude of new ways.

In regard to you parents, the existence of this parents' section of the CAID represents an opportunity for continuing education as does the recent TRIPOD meeting in Tennessee and your many other meetings and communications.

Yes, these times are confusing and it's often difficult to sort out things for neat placement into little boxes. There are certainly things which could be improved greatly as we often hear from many people who run around figuratively flogging themselves across the back, seemingly afflicted by a kind of macroistic masochism.

At the same time, there are a number of positive happenings in these areas of prevention, identification, intervention, evaluation, placement and education, and I would urge you to consider that there is indeed a tide in the affairs of men which, taken at the flood leads on to fortune. In closing, I would urge you to consider that on such a full sea we are now afloat.

JUNE 27—DISCUSSION GROUPS

The last morning of the Parent Section meeting was given over to discussion of topics of primary interest to local parent organizations. Five discussion groups were formed, followed by a panel session in which the discussion group leaders participated as panelists.

1. Fundraising—Leader, Mr. John Locke, Takoma Park, Md.

Numerous methods of raising funds for organizational use ranging from door-to-door sales to raffles were discussed. Instances of successful local campaigns were described; however, emphasis was placed on the importance of enlisting the support of parents nationally, as members of the organization. It was stated that a minimum of 25 per cent of eligible parents is required to make the Parent Organization completely viable.

2. Legislation—Leader, Mrs. Mary J. Rhodes, Greenbelt, Md.

The discussion in this group ranged widely and may be summarized by the following highlights:

a. In dealing with legislators it pays to be well informed; have all facts in hand, well organized, and properly based in the law.

b. The full Federal spending authorization for handicapped children has never been appropriated. Less than 60 per cent has been made available. This seems to set a pattern for appropriations at the state level.

c. Educational appropriations face heavy competition from public works and, in addition, are susceptible to easy reduction.

d. It is best to work with State Education Department to develop information concerning Federal, State and Local funding.

e. All children, including the handicapped are entitled to a sound basic education. It is up to the parents to see that their deaf children are not short-changed.

f. Organized approaches to legislators are best. Show that what is proposed has the backing of many concerned and responsible people.

3. ORGANIZATION—LEADER, MRS. DOLORES YOWELL, LOMBARD, ILL.

(No minutes submitted.)

4. FEDERAL SERVICES—LEADER, DR. FRANK WITHROW, WASHINGTON, D.C.

(No minutes submitted.)

5. VOCATIONAL REHABILITATION—LEADER, DR. MARSHALL HESTER, LAS CRUCES, N. MEX.

A well-attended discussion group emphasized the following points:

a. Schools need to keep parents and vocational rehabilitation counselers better informed; publicity and information must be continuous.

b. There is a great need to hire and train more effective VR counselors. Counselors must be able to use manual communication fluently; being able to sign and fingerspell is not enough. They must be able to read signs and be fully conversant with the problems of deafness. VR needs more deaf counselors.

c. More hearing, high-school-age children of deaf parents need to be recruited for VR work.

d. Congressional Bill H.R. 8395 was discussed. Participants were urged to write to their congressman in support of this bill.

e. Parents must urge companies which employ the deaf to pay the foreman or boss to take classes in manual communication: the key word is *pay*.

f. Using a soft-sell approach, influence companies to hire the deaf; high-pressure tactics don't work.

g. Plan your child's career with the VR counselor so your child won't be automated out of business.

h. Uncooperative VR counselors probably lack an understanding of the problems of the deaf. It is the parent's responsibility to do all that is possible to remedy this defect.

i. There is a definite need for a strong parent group. To be effective in obtaining better VR services the parent group must be united; splinter groups reduce effectiveness.

THE CONVENTION OF AMERICAN INSTRUCTORS OF THE DEAF PROGRAM

SATURDAY, JUNE 26, 1971

Registration (8 a.m.–3 p.m.) Parnell Hall Auditorium

SUNDAY, JUNE 21, 1971

Registration (8 a.m.–5 p.m.) Parnell Hall Auditorium

First General Session (7:30 p.m.) "Hall of Industry," State Fairgrounds

Presiding: Dr. Kenneth R. Mangan, President, Convention of American Instructors of the Deaf, Illinois School for the Deaf, Jacksonville.
Invocation: The Right Reverend Christoph Keller, Jr., D.D., S.T.D., Bishop, The Episcopal Diocese of Arkansas.
Star Spangled Banner: Led by Mrs. Judy Seawright, Instructor, Arkansas School for the Deaf.
O Canada: Led by Dr. J. G. Demeza, Superintendent, Ontario School for the Deaf, Belleville.
Greetings from the Arkansas School for the Deaf: Mr. Abner K. Junkin, Chairman, Board of Trustees, Arkansas School for the Deaf.
Greetings from the City of Little Rock: Honorable George E. Wimberley, Mayor.
Greetings from the Arkansas State Department of Education: Mr. A. W. Ford, Commissioner of Education, Arkansas State Department of Education, Little Rock.
Response from Canada: Mr. Donald Kennedy, Superintendent, Ontario School for the Deaf, Milton.
Response from the United States: Dr. Stanley D. Roth, Superintendent, Kansas School for the Deaf, Olathe.
Introduction: Dr. Kenneth R. Mangan.
Keynote Address: The Honorable Dale Bumpers, Governor, State of Arkansas.
Announcements: Dr. Kenneth R. Mangan.
Reception: "Hall of Industry". Host—Arkansas School for the Deaf, Teachers' Association.

MONDAY, JUNE 28, 1971

Program

Second General Session (9 a.m.) Parnell Hall Auditorium

Dr. Kenneth R. Mangan, Presiding

9:00 a.m. *Intrpduction of Speaker:*
Speaker: Mr. John W. Melcher, Administrator, Division for Handicapped Children, Wisconsin State Department of Public Instruction. "Some Unmet Needs of Deaf Children."
10:00 a.m. Picture, Convention of American Instructors of the Deaf.
10:15 a.m. Picture, Conference of Executives of American Schools for the Deaf.

Multi-Handicapped (10:30 a.m.–4 p.m.) Lower School Auditorium

Chairman: Dr. J. G. Demeza, Superintendent, Ontario School for the Deaf, Belleville.
10:30 a.m.–11:45 a.m. Programs for Multi-Handicapped in Schools for the Deaf.
Chairman: D. E. Kennedy, M.Ed., Superintendent, Ontario School for the Deaf, Milton, Canada.
"*The Exceptional Unit at the Arkansas School for the Deaf.*" Susan Porter, M.S.E., Supervising Teacher, The Exceptional Unit, Arkansas School for the Deaf, Little Rock, Arkansas.

"*The Present Program at Milton.*" Gary H. Martins, Assistant Student Services Administrator, Ontario School for the Deaf, Milton, Canada.

1:30 p.m.–3 p.m. Programs for Deaf Retarded.

Chairman: Dr. Lyle L. Lloyd, Executive Secretary, Mental Retardation Research and Training Committee, National Institute of Child Health and Human Development, Bethesda, Maryland.

"*Programming Considerations for the Deaf Retarded.*" Nona L. Burrows, Research Associate, Department of Special Education and Rehabilitation, University of Pittsburgh and Dr. Lyle L. Lloyd, Executive Secretary, Mental Retardation Research and Training Committee, National Institute of Child Health and Human Development.

"*Current Trends in Services for the Deaf Retarded in Schools for the Deaf and Residential Facilities for the Mentally Retarded.*" Sylvia M. Hall, Austin State School, and Texana F. Conn, Registered Interpreter of the Deaf, Austin State School.

"*Systematic Development of Communication Modes; Establishment of a Multiple-Response Repertoire for Non-Communicating Deaf Children.*" Shirley L. Berger, Parsons State Hospital and Training Center, Parsons, Kansas.

3 p.m.–4 p.m. Forum on the Deaf Retarded.

Chairman: Dr. Lyle L. Lloyd. This session was used to further develop ideas of the previous session and provide a report of activities of the AAMD-CEASD Joint Committee on the Deaf-Retarded, with specific reference to future needs and projects, and was structured for audience discussion to obtain feed-back and ideas from the membership.

Discussant: AAMD-CEASD Joint Committee, Jack W. Brady, Nona L. Burrows, W. Lloyd Graunke, Alfred Hirshoren, John G. Nace.

Vocational Education (10:30 a.m.–4 p.m.) ASB Auditorium

Chairman: Hollis W. Wyks, Assistant Superintendent, Marie H. Katzenbach School for the Deaf.

10:30 a.m. "*What Opportunities are Needed by Deaf Students.*" Edmond D. Cassetti, Director of Vocational Education and Rehabilitation Services, American School for the Deaf, Hartford, Connecticut.

10:30 a.m. "*Counseling Deaf Students so that They May Take Advantage of Opportunities or Make Better Use of Opportunities Available to them Now.*" Stanley R. Traxler, Assistant Director, Program for the Deaf, Seattle Community College, Seattle, Washington.

1:30 p.m. "*The Vocational Student in a School for the Deaf: His Opportunities.*" Dennis Q. Drake, Vocational-Technical Principal, Iowa School for the Deaf, Council Bluffs, Iowa.

"*Opportunities for the Low Under-Achieving Deaf: The Regional School.*" Roy G. Parks, Superintendent, Arkansas School for the Deaf, Little Rock, Arkansas.

"*The St. Paul Technical Vocational Institute's Technical Vocational Program for Deaf Students.*" Robert Lauritsen, Director, Program for the Deaf, St. Paul Technical-Vocational Institute, St. Paul, Minnesota.

"*Opportunities Through True Vocational Education.*" John Degler, Vocational Principal, Pennsylvania School for the Deaf, Mt. Airy, Pennsylvania.

Library (10:30 a.m.–4 p.m.) ASB Dining Room

Chairman: Anna Huff, Librarian, Wisconsin School for the Deaf. *Recorder:* Mrs. Bryan Harris, Missouri School for the Deaf.

10:30 a.m. "*The School Media Center—A Member of the Team.*" Billy Stark, Director, Illinois School for the Deaf Media Center.

"*Media News.*" George Propp, Midwest Regional Media Center, Lincoln, Nebraska.

"*A Systems Approach To A Media Center in A School for the Deaf.*" Goldie Trboyevich, Kendall School. (*Paper will be read by Dr. Ben Schowe.*)

"*Educational Media in a School for the Deaf.*" Joel D. Ziev, Director, Educational Media, American School for the Deaf.

1:30 p.m. Business Meeting, School Librarians of the Deaf and Associates, Dr. Ben M. Schowe, President, presiding.

Principals and Supervising Teachers—Upper School Library

10:30 a.m.–4 p.m.

Chairman: Winfield McChord, Jr., Principal, Kentucky School for the Deaf.

10:30 a.m.–11:15 a.m.

"*Toward Creating Effective Learning Environments at the Model Secondary School for the Deaf.*" Rene Kieliger, Coordinator of Instruction, Model Secondary School for the Deaf.

11:15 a.m.–11:45 a.m. Question—Answer Period.

1:30 p.m.–2:30 p.m. "*The Organization and Administration of ETV–CCTV in Schools for the Deaf.*" H. G. Royall, Asst. Superintendent, North Carolina School for the Deaf, Morganton.

2:30 p.m.–4 p.m. "*The Organization and Administration of Parent Education at the Carver School for the Deaf.*" Steve L. Mathis, III, Principal, Carver School for the Deaf, Gambrills, Maryland.

Contributed Paper (10.30 a.m.–4 p.m.) Parnell Hall Auditorium

Chairman: Dr. William N. Craig, Superintendent, Western Pennsylvania School for the Deaf.

10:30 a.m. "*When Learning Becomes Creative.*" Marilyn M. Williams, North Carolina School for the Deaf, Morganton.

11:15 a.m. "*Some Observations On the Education and Rehabilitation of Black Deaf Persons.*" Frank G. Bowe, Jr., Research Assistant, Sensory Study Section, Social and Rehabilitation Service, U.S. Department of Health, Education, and Welfare.

1:30 p.m. "*Career Development of Deaf Young People.*" Dr. David W. Lacey and Panel, National Technical Institute for the Deaf.

"*Practical Information on Career Orientation.*" Walter Eugene Hines, Iowa School for the Deaf.

"*The Development and Implementation of a Career Development Program—Its Implications for Deaf Young People and Teachers.*" Colin E. Tisshaw, principal, The Mackay Center for Deaf and Crippled Children, Montreal, Canada.

Gallaudet Banquet (7 p.m.) "Hall of Industry," State Fairgrounds

6 p.m. Social Hour.

7 p.m. Gallaudet Banquet (Open To All), "Hall of Industry," Buses will leave designated places from 5–5:15 p.m.

TUESDAY, JUNE 29, 1971

Third General Session (9 a.m.–10:15 a.m.) Parnell Hall Auditorium

9 a.m. Business Meeting—Election of Officers. Presiding, Dr. Kenneth R. Mangan, President.

Curriculum (10:30 a.m.–4:30 p.m.) ASB Auditorium

Chairman: Dr. Doin Hicks, Dean, Pre-College Programs, Gallaudet College, Director, Model Secondary School for the Deaf.

Recorder: Leland Clack, Coordinator of Mathematics and Special Projects, Kendall School, Gallaudet College.

10:30 a.m. "*Cognition and Curriculum.*" Dr. Harriet G. Kopp, Professor, Speech and Hearing Clinic, San Diego State College.

11:15 a.m. "*Implementing a Program of Individualized Learning.*" Dr. Doin Hicks, Dean, Pre-College Programs, Gallaudet College, Director, Model Secondary School for the Deaf.

1:30 p.m. "*Individualizing the Curriculum Through Use of Instructional Packages.*" James Kearney, Curriculum Development Associate, Model Secondary School for the Deaf.

2 p.m. "*Developmental Language Processes in the Young Deaf Child*" Dr. Judith Burroughs, Psychologist, Callier Hearing and Speech Center.

2:45 p.m. "*Individualizing Language Curricula*". Frank Powell, Head, Educational Division, Callier Hearing and Speech Center and Virginia Herzog, Curriculum Coordinator, Callier Hearing and Speech Center.

Federal Programs (10:30 a.m.–4 p.m.) ASB Dining Room

Chairman: Dr. Frank B. Withrow, Director Division of Educational Services, Bureau of Education for the Handicapped.

10:30 a.m.–11:45 a.m. *Film*—Dr. Sidney P. Marland, Commissioner, United States Office of Education, Department of Health, Education, and Welfare.

"*Federal Programs for the Handicapped*". Dr. Frank B. Withrow, Director, Division of Education Services, Bureau of Education for the Handicapped.

1:30 p.m.–4 p.m. "*Preschool Education for the Deaf*". Jane DeWeerd, Education Program Specialist, Early Childhood Education for the Handicapped, Bureau of Education for the Handicapped.

"*Career Education for the Deaf in the 70's*". Malcolm J. Norwood, Assistant Chief, and Ernest E. Hairston, Education Program Specialist, Media Services and Captioned Films, Bureau of Education for the Handicapped.

Contributed Papers (10:30 a.m.–4 p.m.) Parnell Hall Auditorium

Chairman: Dr. William N. Craig, Superintendent, Western Pennsylvania School for the Deaf.

10:30 a.m. "*Are They Not Educators of the Deaf?*" Shirley R. Curtis, Coordinator, Residential, Health and Social Work Services, Rochester School for the Deaf.

"*The Role of the Paraprofessional in the Classroom for the Deaf*". Melvin R. Ladson, Supervisor of Deaf Children, Massachusetts Department of Education.

1:30 p.m. "*Social Patterns of Deaf People in Integrated Programs*". Dr. Roger Riffer and Panel, National Technical Institute for the Deaf.

"*Social Patterns of Deaf People in Integrated Settings*". Harold Merwin Mowl, Jr., Western Pennsylvania School for the Deaf.

"*A Community Service Volunteer Program for Students at the National Technical Institute for the Deaf*". William F. Yust, National Technical Institute for the Deaf.

Day Programs (10:30 a.m.–4 p.m.) Upper School Library

Chairman: Dr. John D. Harrington, Principal, School for Language and Hearing Impaired Children, New York City Public Schools.

10:30 a.m. "*The Status of the Public Day School for the Deaf in the United States—1971*". (Based upon a questionnaire sent to 30 public day schools.) Dr. John D. Harrington, Principal, School for Language and Hearing Impaired Children New York City Public Schools.

1:30 p.m.–4 p.m. "*The Development of Kendall School into a Demonstration Elementary School for the Deaf*". Dr. Thomas R. Behrens, Director, and David R. Updegraff, Kendall School, Washington, D.C.

"*A Public Day School in Inner-City Newark*". Richard S. Cooke, Teacher, Bruce Street School, Newark, N.J.

"*The Need for Objective Evaluation of the Status and Goals of Comprehensive Public Education Programs*". Dr. Harriet Green Kopp, Professor, Department of Speech Pathology and Audiology, San Diego State College.

"*Gallaudet School for the Deaf—A Public Day School in St. Louis, Missouri*". Lewis B. Wahl, Principal and Supervisor of Hard of Hearing and Sight Conservation Classes, Gallaudet School for the Deaf, St. Louis, Mo.

Post Secondary Programs (10:30–4 p.m.) Lower School Auditorium

Chairman: Robert Lauritsen, Project Coordinator, Technical Vocational Program for Deaf Students, St. Paul Area Technical Vocational Institute.

Recorder: Patrick W. Duggan, St. Paul Technical-Vocational Institute, St. Paul, Minnesota.

10:30 a.m. "*A National Program of Continuing Education for the Deaf*". Dr. R. Orin Cornett, Vice-President for Planning and Public Service, Gallaudet College, Washington, D.C.

"*Low (Under) Achieving Deaf People—Meeting Their Needs in the Seventies*". Dr. Larry Stewart, Associate Director, Deafness Research and Training Center, New York University, New York, New York.

"*The Interpreter—An Integral Person in Integrated Education*". Patrick W. Duggan, Counselor, St. Paul Technical Vocational Institute, St. Paul, Minnesota.

1:30 p.m.–4 p.m. "*Higher Education for Deaf Students—An Integrated Approach*". Dr. Thomas A. Mayes, Coordinator, College Services for the Deaf, San Fernando Valley State College, Northridge, California.

"*Utah State University Facilitative Program for the Hard of Hearing: 1968–1971*". Thomas C. Clark, Assistant Professor, Dr. Frederick S. Berg, Associate Professor, Rex C. Ivory, Coordinator, Department of Communicative Disorders, Utah State University, Logan, Utah.

"*The Regional Post-Secondary Programs: Delgado Junior College, St. Paul Technical Vocational Institute, and Seattle Community College*". Dr. Herbert W. Barkuloo, Director, Program for the Deaf, Seattle Community College, Seattle, Washington.

"*Project Dawn—A Look at the Future*". Carl J. Kirchner, Director, Project Dawn San Fernando Valley State College, Northridge, California.

"*NTID in 1971*". Dr. James R. Speegle, Assistant Dean for Support Education, National Technical Institute for the Deaf, Rochester, N.Y.

Convention Picnic (6:30 p.m.) near Superintendent's Residence

1:30 p.m. Ozark Craftsmen Demonstrating Their Skills.
6:30 p.m. Convention Picnic and Entertainment.

WEDNESDAY, JUNE 30, 1971

Fourth General Session (8:30 a.m.–10:15 a.m.) Parnell Hall Auditorium

Dr. Armin G. Turecheck, President-Elect, *Presiding*

8:30 a.m.–9 a.m. "*Annual Survey of Hearing Impaired Children and Youth*". Augustine Gentile, Director, and Peter Ries, Office of Demographic Studies, Gallaudet College.

"*The Achievement Testing Program Conducted by the Annual Survey of Hearing Impaired Children and Youth*". S. DiFrancesca, Office of Demographic Studies, Gallaudet College.

9 a.m.–9:30 a.m. "*An Experiment in Education*". Dr. Doin Hicks, Dean, Pre-College Programs, Gallaudet College, Director, Model Secondary School for the Deaf.

9:30 a.m.–10:15 a.m. "*Resourceteria and More*". Dr. Ben Schowe, Ohio School for the Deaf, President, School Librarians for the Deaf and Associates.

Presentation of Transparencies. Dr. Raymond Wyman, Director, Northeast Regional Media Center for the Deaf.

Reading and Language (10:30 a.m.–4 p.m.) Parnell Hall Auditorium

Chairman: Kenneth R. Lane, Professional Editor, Special Education Department, American Education Publications, Middletown, Connecticut.

Recorders: Philip E. Cronlund, American School for the Deaf. Dr. Ben Schowe, Ohio School for the Deaf.

10:30 a.m.–11 a.m. "*Literacy—The Keystone for Providing More Opportunities for Deaf Children*". Richard W. Flint, Editorial Director, American Education Publications.

11 a.m.–11:45 a.m. "*Computer-Assisted Instruction in Language*". Jamesine E. Friend, Director, Computer-Assisted Instruction for the Deaf Project, Stanford University, Stanford, California.

1:30 p.m.–3 p.m. Demonstration.

3 p.m.–3:40 p.m. "*Some Preliminary Research Results: Computer-Assisted Instruction for the Deaf Project*". A. W. Douglas, Superintendent, Texas School for the Deaf.

3:40 p.m.–4 p.m. "*Computer-Assisted Instruction in Language at the Kendall Demonstration Elementary School for the Deaf*". Dr. Thomas R. Behrens, Professor of Education, Director, The Kendall Demonstration Elementary School for the Deaf; Ben F. Provance, Associate Professor of Education, The Kendall Demonstration Elementary School for the Deaf.

Preschool (10:30 a.m.–4 p.m.) Lower School Auditorium

Chairman: Dr. Freeman McConnell, Director The Bill Wilkerson Hearing and Speech Center, Nashville, Tennessee.

10:30 a.m.–11:45 a.m. "*A New Responsibility: Deaf Children from Birth to Three*". *Chairman:* Freeman McConnell, The Bill Wilkerson Hearing and Speech Center.

10:30 a.m. *Introduction.*—Freeman McConnell, Nashville, Tennessee.
10:35 a.m. *"The Bureau of Education of the Handicapped's Concern for Early Intervention Programs"*. Dr. Max Mueller, U.S. Office of Education, Bureau of Education for the Handicapped, Washington, D.C.
10:45 a.m. *"The Learning Environment"*. Kathryn Horton, Bill Wilkerson Hearing and Speech Center, Nashville, Tennessee.
10:55 a.m. *"Parent-Teacher Interaction"*. Mary Tidwell, John Tracy Clinic, Los Angeles, California.
11:05 a.m. *"Parent-Child Interaction"*. Dr. June Miller, University of Kansas Medical Center, Kansas City, Kansas.
11:15 a.m. *"Handling Parents' Feelings"*. Laura Knox, Bill Wilkerson Hearing and Speech Center, Nashville, Tennessee.
11:25 a.m.–11:45 a.m. Discussion.
1:30 p.m.–4 p.m. *"Management of Deaf Children from Birth to Three"* Sue Lillie, Bill Wilkerson Hearing and Speech Center. Informal Discussion Panel—Moderator, Freeman McConnell.
Dr. Max Mueller, U.S. Office of Education. Dr. Rollie Houchins, University of Kansas Medical Center.
Dr. Audrey Simmons, Central Institute for the Deaf.
Sue Lillie, Bill Wilkerson Hearing and Speech Center.
Emily Miller, Bill Wilkerson Hearing and Speech Center.
1:30 p.m.–3 p.m. *"Acoustic Input"*. Dr. R. R. Houchins, University of Kansas Medical Center. Experience, Rationale and Results, Programing Language Input, Programing Visual Input.
3:10 p.m.–4 p.m. Implementation of Programs for Deaf Children under Three.

Mathematics (10:30 a.m.–4 p.m.) Upper School Library

Chairman: John Kubis, Mathematics Department, National Technical Institute for the Deaf.
Recorder: Bruce Godsave, Gallaudet College.
10:30 a.m. *"Ideas or Classroom Strategies"*. Leon Auerbach, Gallaudet College.
11:15 a.m. *"An Introduction to the Geoboard"*. Bruce Godsave, Gallaudet College.
1:30 p.m. *"Putting Mathematics to Work"*. Bob Klafehn, National Technical Institute for the Deaf.
2:30 p.m. *"The Metamorphosis of High School Math in a School for the Deaf, or, 30-Years of High School Math at the Indiana School for the Deaf"*. Norman Brown, Indiana School for the Deaf.
3:30 p.m. *"Uses of Computer Assisted Instruction in the Teaching of Mathematics"*. Dr. O. Dennis Barnes, National Technical Institute for the Deaf.

Communication (10 a.m.–4 p.m.) ASB Dining Room

Chairman: Dr. H. W. Barkuloo, Director, Program for the Deaf, Seattle Community College.
10:30 a.m.–11:30 a.m. *"Cued Speech at the Mary E. Bennett School"*. Margaret Highnote, Mary E. Bennett School for the Deaf.
1 p.m.–2 p.m. *"Orosensory Perception in the Deaf"*. Milo E. Bishop, Robert L. Ringel, and Arthur S. House, Department of Audiology, Purdue University.
2 p.m.–2:45 p.m. *"The Reception of Verbal Information by Deaf Students Through a Television Medium—A Comparison of Speechreading, Manual Communication and Reading"*. Dr. Robert R. Gates, Director of Vestibule Programs, National Technical Institute for the Deaf.
2:45 p.m.–4 p.m. *"Three Years of the Total Approach—1968-1971"*. Roy Holcomb, Area Supervisor, Hearing Impaired Program, Santa Ana, California.
"The Total Approach". John Prince, M.D., parent, Santa Ana School District.

Educational Media (10:30 a.m.–4 p.m.) ASB Auditorium

Chairman: Dr. Gilbert Delgado, Chief, Media Services and Captioned Films, Bureau of Education for the Handicapped.
10:30 a.m. Opening Remarks. Dr. Gilbert L. Delgado, Chief, Media Services and Captioned Films.

10:45 a.m. "*It Makes A Difference*". A multi-media Presentation of Media Activities in the Field—Dr. William Jackson and staff, Southern Regional Media Center, Knoxville, Tennessee.

11:45 a.m. "*A Doctoral Program at Syracuse University in Instructional Technology for Education of the Deaf*". James Achtzehn, Syracuse University.

11:30 a.m. "*Media Specialist Program—University of Massachusetts*". Anita Nourse, Coordinator.

1:30 p.m. "*The Special Education IMC/RMC Network: An Overview and Emphasis on Resources Available to Educators of the Hearing Impaired*". Dr. Philip Newburg, Assistant Executive Director and Coordinator, IMC/RMC Network, Arlington, Va.

2 p.m. "*Project ME (Media for the Exceptional)*". Dr. Sol Roshal, Director, Dubnoff School for Educational Therapy, North Hollywood, California.

2:40 p.m. "*Computer Based Project—Syracuse City Schools Program*". Dr. Bernice Kipfer, Syracuse, N.Y. City Schools District.

3:30 p.m. "*Concluding Remarks*". Dr. Gilbert L. Delgado.

NACED Open Formum (4 p.m.) Parnell Hall Auditorium

4 p.m.–6 p.m. National Advisory Committee on the Education of the Deaf. Open Forum in Parnell Hall.

Little Paper Family Banquet (7:30 p.m.) Top of the Rock

6:30 p.m. Social Hour.

7:30 p.m. "*Little Paper Family Banquet*" at the Top of the Rock.

THURSDAY, JULY 1, 1971

Coaches and Physical Education (9 a.m.–2:30 p.m.) ASB Dining Room

Chairman: Warren W. Fauth, Athletic Director, California School for the Deaf, Riverside.

Recorder: Laurence Beaver, Boys Physical Education Director, Kansas School for the Deaf.

9 a.m.–9:15 a.m. Introductions and registration of coaches and physical education instructors.

9:15 a.m.–10 a.m. "*The Present Status of Physical Education and Sports Programs in Residential Schools for the Deaf*'. Warren Fauth, Athletic Director, California School for the Deaf, Riverside. Discussions and questions from the floor.

10:15 a.m.–11:45 a.m. Panel Discussion.

Participants: Paul Barr, Athletic Director, Maryland School for the Deaf; Virginia Stevenson, Physical Education, Arizona School for the Deaf and Blind; James Alsobrook, Athletic Director, Florida School for the Deaf; Clarence Davis, Athletic Director, Missouri School for the Deaf; Dale McMahan, Athletic Director, Louisiana State School for the Deaf; Stephany Beaver, Physical Education, Kansas School for the Deaf.

Topics: 1. Aids in Curriculum development for physical education. 2. Girls Physical Education—Instructional, recreational, intramural and interscholastic. 3. Relationship of physical education to other departments in the school. Problem areas—communication, scheduling, sports and recreation. 4. The role of individual sports such as: tennis, golf, bowling and swimming.

11:45 a.m.–1:30 p.m. Lunch.

1:30 p.m. "*Physical Education for the Deaf Multi-Handicapped*". Peter C. Lanzi, California School for the Deaf, Riverside. Discussion and questions.

Audiologists (9 a.m.–2:30 p.m.) Lower School Library

Chairman: Dr. Jerome G. Alpiner, Director, University of Denver Speech and Hearing Center

9 a.m.–9:45 a.m. "*The Audiologic Assessment of Deaf Students*". Dr. Lyle L. Lloyd, Mental Retardation Program, National Institute of Child Health and Human Development, Bethesda, Md.

9:45 a.m.–10:30 a.m. "*An Auto-Tutorial Approach for Exploring the Sensory Capabilities of Young, Hearing Impaired Children*". Dr. Carl Binnie, and Dr. David Goldsten, Department of Audiology and Speech Sciences, Purdue University, Lafayette, Indiana.
10:30 a.m.–11:15 a.m. "*A Linguistic Approach to the Teaching of Speech-reading: Theoretical and Practical Concepts*". Dr. Raymond H. Hull, Director of Audiological Services, University of Northern Colorado, Greeley, Colorado.
11:15 a.m.–11:45 a.m. Discussion Period.
1:30 p.m.–2:15 p.m. "*An Infant Developmental Language Program*". Carol Amon, Instructor, Department of Speech Pathology and Audiology, University of Denver, Denver, Colorado.

Teacher Preparation (9 a.m.–2:30 p.m.) ASB Auditorium

Chairman: Marlyn O'Neill, Director, Teacher Preparation, Education of the Deaf, University of Illinois, Urbana.
9 a.m.–11:45 a.m. "*Preparing Supervisors for Programs for Deaf Children*". F. Eugene Thomure, Associate Professor of Special Education, Memphis State University, Memphis, Tennessee.
"*Reflections on Twenty Years of Preparation of Teachers of Deaf Children*". Sophia L. French, Coordinator, Teacher Preparation Deafness, Eastern Michigan University, Ypsilanti, Michigan.
"*Recent Research on Professional Skills and Personal Characteristics of Student Teachers of the Deaf*". D. J. Power, Doctoral Candidate, Department of Special Education, University of Illinois, Urbana.
"*The Specialization of Educational Audiology*". Thomas C. Clark, assistant professor, Department of Communicative Disorders, Utah State University.
1:30 p.m.–2:30 p.m. Open discussion on current issues in teacher preparation.

Post Secondary Programs (9 a.m.–2:30 p.m.)

Chairman: Robert Lauritsen, Project Coordinator, Technical Vocational Program for Deaf Students, St. Paul Area Technical Voactional Institute.
9 a.m.–11:45 a.m. "*Meaningful Interpretation of Complex Test Results for Post-Secondary Planning*". Dr. Gerard Walter, Research Associate, The National Technical Institute for the Deaf, Rochester, Institute of Technology, Rochester, N.Y.
"*Measuring the College Potential of the Hearing Impaired*". Bernard L. Greenberg, Director of Admissions and Records, Gallaudet College, Washington, D.C.
"*Educationally Significant Traits of NTID Students*". James Titus and Barbara Hanner, The National Technical Institute for the Deaf, Rochester Institute of Technology, Rochester, New York.
'*Counseling the Post-Secondary Deaf Student: Implications for Elementary and Secondary Education*". Dr. James Collins, Assistant Dean for Developmental Education, The National Technical Institute for the Deaf, Rochester, New York.
1:30 p.m.–2:30 p.m.. "*The Impact of Emerging Post-Secondary Programs on Education of the Deaf*". A Panel-Audience Dialogue. Members of the Panel will be those persons who have presented papers during the Post Secondary Section Meetings.

Reading and Language (9 a.m.–2:30 p.m.) Parnell Hall Auditorium

Chairman: Kenneth R. Lane, Professional Editor, Special Education Department, American Education Publications, Middletown, Connecticut.
Recorders: Philip E. Cronlund, American School for the Deaf. Dr. Ben Schowe, Ohio School for the Deaf.
9 a.m.–11:45 a.m. Workshops: "*Practical Applications of Linguistics in the Classroom*". Parnell Hall—Section I—Teachers of Children ages 2–10.
"*Patterned Language—A Practical Application of Linguistic Principles*". B. J. Peck, Assistant Superintendent, Oregon School for the Deaf, Salem, Oregon. Upper School Library—Section J—Teachers of Children—Ages 11–18.
"*The Developmental Use of Transformational Grammar*". James E. McCarr, Language Coordinator, Oregon School for the Deaf, Salem, Oregon.
11:45 a.m.–1:30 p.m. Lunch.

1:30 p.m.–2:30 p.m. Wind-up discussion session with both groups—Parnell Hall.
2:45 p.m.–4 p.m. Fifth General Session—Parnell Hall Auditorium, Business Meeting. Dr. Kenneth R. Mangan, President, Presiding.

THURSDAY, JULY 1, 1971

Convention Banquet (8 p.m.) State Fairgrounds "Hall of Industry"

Program

Presiding.—Dr. Kenneth R. Mangan, President, Convention of American Instructors of the Deaf.
Invocation.—The Reverend Robert Parrish.
Toastmaster.—Mr. P. D. Gathright.
Speaker.—Mr. Chester Lauck, "Lum" of Lum and Abner.
Announcements.—Dr. Kenneth R. Mangan.
Entertainment.—Mrs. Betty Fowler.

FRIDAY, JULY 2, 1971

Called Committee Meetings, Convention of American Instructors of the Deaf.
Called Committee Meetings, Conference of Executives of American Schools for the Deaf.
Trip to Dogpatch.
Golf Tournament—Rebsamen Park Golf Course.

THE CONVENTION OF AMERICAN INSTRUCTORS OF THE DEAF

SUNDAY, JUNE 27, 1971

First General Session (7:30 p.m.) "Hall of Industry", State Fairgrounds

Presiding: Dr. Kenneth R. Mangan, President, Convention of American Instructors of the Deaf, Illinois School for the Deaf, Jacksonville.
Invocation: The Right Reverend Christoph Keller, Jr., D.D., S.T.D., Bishop, The Episcopal Diocese of Arkansas.
Star Spangled Banner: Led by Judy Seawright, Instructor, Arkansas School for the Deaf.
O Canada: Led by Dr. J. G. Demeza, Superintendent, Ontario School for the Deaf, Belleville.
Greetings from the Arkansas School for the Deaf: Mr. Abner K. Junkin, Chairman, Board of Trustees, Arkansas School for the Deaf.
Greetings from the City of Little Rock: Honorable George E. Wimberley, Mayor.
Greetings from the Arkansas State Department of Education: A. W. Ford, Commissioner of Education, Arkansas State Department of Education, Little Rock.
Response from Canada: Donald Kennedy, Superintendent, Ontario School for the Deaf, Milton.
Response from the United States: Dr. Stanley D. Roth, Superintendent, Kansas School for the Deaf, Olathe.
Introduction: Dr. Kenneth R. Mangan.
Keynote Address: The Honorable Dale Bumpers, Governor, State of Arkansas.
Announcements: Dr. Kenneth R. Mangan.
Reception: "Hall of Industry". Host—Arkansas School for the Deaf, Teachers' Association.

SUNDAY, JUNE 27

Dr. MANGAN. Ladies and Gentlemen, it is my privilege to open this session of the Convention of American Instructors of the Deaf. We are honored by having Bishop Christoph Keller, Jr., give the Invocation.

The Invocation was given by Bishop Keller.

Mrs. Judy Seawright, instructor, Arkansas School for the Deaf, led the audience in singing the Star Spangled Banner.

Dr. J. G. Demeza, superintendent, Ontario School for the Deaf, led the audience in singing O Canada.

Dr. MANGAN. We are now to have greetings to the Convention. First, from the Arkansas School for the Deaf, will be Mr. Abner K. Junkin, Sr., chairman of the Board of Trustees for the Arkansas School for the Deaf.

GREETINGS FROM CHAIRMAN OF THE BOARD OF TRUSTEES, ARKANSAS SCHOOL FOR THE DEAF

Abner K. Junkin, Sr.

Bishop Keller, Governor Bumpers, Mayor Wimberly, Dr. Mangan, Distinguished Guests, Ladies and Gentlemen of the 43rd Conference of Executives of American Schools for the Deaf—the 45th Convention of the American Instructors for the Deaf and the 2nd National Parent Association of the Deaf: On behalf of the Board of Trustees I welcome you to Little Rock—Home of the Arkansas School for the Deaf.

As you know, this is the first time that we have had the honor of being host to such a distinguished group from the deaf community. It pleases us very much to have this opportunity.

Governor Bumpers, your Board of Trustees would like to say that we had a big hand in all of these arrangements so we could say to you and to our guests, "See what we did." We can only say, "See what all of these hard working, wonderful people at the Arkansas School for the Deaf have done under the leadership of Superintendent Roy G. Parks and Assistant Superintendent Morris Rickell." It would be remiss of me not to mention the Chairman of the various committees who have gone that extra mile to make this a successful meeting.

Theda Gatlin
Lois Kidd
Diane York
Marvin Wood
Hilma Reed
Mary Nell Adcock
Jerri Sue Hairston
Francis Black
Al Simmons
Johnnie Mac Henry
Lonnie Tubb
Leta Windham

Houston Nutt
Susan Porter
Betsy Maxwell
Imogene Nutt
Arthur Crow
John Bess
Jeff Windham
Jewel Mainard
Jim Cook
Louis Burgener
Wilbur Mosier
Janis Shippey

Dr. J. M. Woolly, Superintendent of the Arkansas School for the Blind and his staff deserve a "Thank you" for the use of their facilities and service.

We, the Board of Trustees, are very proud of the committee chairman and the committee members and we thank them very much. The people of the State of Arkansas, as represented by you, Governor Bumpers, have every reason to be proud of the State Schools for the Deaf and Blind.

If while here, you are in need of anything to make you more comfortable or to make your stay more pleasant, please let your desires be known in the front office. If they can't get the job done, Roy Parks has a *Right-Hand Man* (Woman) by the name of Connie

Lacy, who has a WATTS line to the *Big House on the Hill*—this combination can get most any problem solved.

Thank you for coming—Please come again.

Dr. MANGAN. Thank you very much, Mr. Junkin. We will now hear from The Honorable George E. Wimberley, mayor of the City of Little Rock.

GREETINGS FROM THE CITY OF LITTLE ROCK

George E. Wimberley, Mayor

Thank you, Dr. Mangan, it is indeed a pleasure for me to be here tonight to welcome such a distinguished group of great convention people, delegates of the American Instructors of the Deaf throughout this country of ours, and also others outside of the United States. It is always a pleasure for me to represent my city and to meet with those who are here to visit with us or those who are attending conventions such as yourselves. Little Rock, we certainly feel and we know is a great city. We love people. We want people to love us. Because Little Rock is the seat of Government for the State of Arkansas, we feel that we are a part of the entire state and we represent our wonderful people and our great state in all that we do here in Little Rock. We, at the present time, have a full-time convention bureau operating under our city government. We have under construction a convention center, which we think will be the finest in the nation, and which will be completed in the next two years. We only wish that it could have been completed for your convention this year. Being mayor of Little Rock is certainly a great honor for me. I was a country boy for the most part of my life, coming to Little Rock some 20 years ago to start my life in the retail drug business here in the city, only a few blocks from our state school for the deaf. Over these years I have been personally acquainted with the staff, and many of the students who visit my store daily, and I certainly have enjoyed this relationship with Mr. Parks and all of his staff. We certainly strive to be of assistance to the students, the staff and all those connected with the school.

I hope your stay here is a pleasant one in Little Rock. We hope that many of you will return soon as visitors or in groups such as this one, and we just want to give to each of you a great, big welcome and say come back to see us. Thank you.

Dr. MANGAN. Thank you very much, Mayor Wimberley. It is now my pleasure to introduce Mr. A. W. Ford, who will bring us greetings from the Arkansas State Department of Education.

GREETINGS FROM THE ARKANSAS STATE DEPARTMENT OF EDUCATION

A W. Ford, Commissioner of Education

Dr. Mangan, Governor Bumpers, Bishop Keller, and I would estimate some 800 friends of children: We in Arkansas are proud of the fact that you have selected our City and the Arkansas School for the Deaf as the host group for your Biennial Convention.

Education is perhaps the most fundamental service of government, and good education is government at its best.

Due to the foresight of a new and dynamic governor and a General Assembly willing to cooperate in his efforts, Arkansas will have, effective July 1 of this year, a structure in government that will present a united front insofar as education of less than college grade is concerned. In our state education has been fragmented since 1936. But effective July 1 of this year all of the facets of education that have to do with providing opportunities which government should provide for children will be under the direction of the Department of Education, and the Governor of Arkansas with appropriate governing boards appointed by him. I think this means a great step forward insofar as education is concerned. I think some of you come from states that have taken this step prior to this time, but as the head of the Department of Educaion, and on behalf of the fine staff and on behalf of the Board of Education, it is my pleasure to express my gratitude for the fact that you have chosen our city and our state for your convention, and to assure you that we are all interested in education. In our state, we believe that all children are entitled to opportunities which will enable them to reach their full potential, regardless of the children involved, and this is the commitment on the part of our state, and we assure you that the children in which you have a special interest will be given that opportunity insofar as the Department of Education is enabled to provide it.

We are pleased that you are here. We know that you are here for business, but we want you to have a good time, and I invite you to come by our department and visit our people. We have a wonderful superintendent at the Arkansas School for the Deaf, and we are proud of him. Thank you very much.

Dr. MANGAN. Thank you, Mr. Ford. Now we will have the response from Canada by Mr. Donald Kennedy of the Ontario School.

RESPONSE FROM CANADA

Donald Kennedy, Ontario School for the Deaf

Dr. Mangan, Reverend Sir, Mayor Wimberley, Mr. Ford, Mr. Governor, Ladies and Gentlemen: For many years Canadians have been associated quite closely with the education of the deaf in the United States. This convention and the Conference of Executives have accepted Canadians for membership. Our students have been permitted to enroll at Gallaudet College and educationists have been accepted for post-graduate training at American universities. Some Canadians have remained in your country to follow careers in deaf education. For these opportunities we have been grateful.

On behalf of Canadians attending this Convention may I express our appreciation for your hospitality and friendship. We look forward to many of you visiting us in Toronto next spring when the Conference of Executives comes to Canada. Perhaps the Convention would consider a Canadian site for a future meeting. We would welcome the opportunity to repay our American neighbors for kindnesses in the past. But for now, best wishes to all for a good Convention.

Dr. MANGAN. I will now call on Dr. Stanley D. Roth, superintendent of the Kansas School, who will give us the response from the United States.

RESPONSE FROM THE UNITED STATES

Dr. Stanley D. Roth, Kansas School for the Deaf

I think it was most appropriate for Dr. Mangan to select a person from the geographical center of the United States to give this response. We, from Kansas, can represent all parts of the United States with no partiality.

We are here this week, I am sure, with the desire to learn from each other. We came to exchange information and with the fervent hope that we may benefit from each other's experiences. There are no heights to which we may not climb, no pinnacle beyond our reach as we forge onward to obtain a better understanding of the problems of our hearing impaired children and to work out valid solutions.

We have come for help which will enable us to keep our schools up to the highest standards which we wish them to maintain. We have come to Little Rock to evaluate the work we are doing in our schools, measuring it by the measuring rods that will be given us.

The best that has been accomplished and produced in our special work will be presented to us here during the next few days. Let us face our problems with an open mind, and come up with the solutions that are going to benefit the greatest number of children.

We appreciate the splendid program planning that has been done by the Program Committee to make this Convention one which everyone, no matter what his work in the school may be, can find help. We have come to get and to take back to our schools help that we need to make our schools better. We have come to give, for each of us as teachers, should have produced something to share with other teachers. We have come with great expectations, and I am sure we will not be disappointed.

For all of the inspiration we shall receive, for all that we shall learn, and for all the pleasures that we can have, we thank Superintendent Roy Parks and his staff most heartily.

Dr. MANGAN. I now want to present some of the platform guests who have not yet been presented to you. First, our interpreter Mr. Henry Bjorlie, who is the manager of the interpreters for the Convention. Our other interpreter, Melvin Brasel from the State of Minnesota. You have already heard our host superintendent referred to, Roy Parks. Our second vice-president, Mr. Robert Dawson from the State of Florida; our president-elect, Dr. Armin Turechek from Colorado; our first vice-president, Jack Brady from Kentucky our board member from Arkansas, Mrs. Johnnie Mac Henry; our secretary-treasurer, Gerald Burstein fom California; our past president, Mr. Marvin Clatterbuck from the State of Oregon. And one of the men who should have been up here, a man who contributes so much to the Convention and to our executive committee, Dr. Howard Quigley.

As you know, we are holding three meetings here this week; the Conference of Executives of American Schools for the Deaf; the Convention of American Instructors of the Deaf, and the Parents of Deaf Children from all over the United States. They have been meeting since Friday, and I would like to introduce the program chairman, Mrs. Lee Katz.

Mrs. KATZ. Thank you very much. On behalf of the Parent Section of CAID, we are very happy to have this opportunity to say thank you, and to ask Dr. Mangan to read this resolution.

RESOLUTION

> The Parent Section of the Convention of American Instructors of the Deaf has worked diligently to effect a formal organization of parents of deaf children, now an accomplished fact. However, the Parent Section committees involved could not have produced this significant accomplishment without the unqualified support of the CAID and its officers; therefore:
>
> *Be it resolved*, That the CAID Parent Section acknowledge this generous support by offering this resolution of thanks to be read to all CAID members now in session here in Little Rock.
>
> *Be it also resolved*, That the newly organized Parent Section will repay this support by working ceaselessly with the CAID to promote all that is good in the field of the education of the deaf.

Dr. MANGAN. We are very honored to have the Governor of the State of Arkansas as our keynote speaker. I must admit I was a little bit skeptical, but in the past I have seen some very distinguished people asked to speak, and at the very last minute they send a deputy to come and make the speech, so I was indeed very, very pleased, when I came here tonight and was able to meet the Governor of the State of Arkansas.

Governor Bumpers is from Franklin County, Arkansas. His home is in Charleston, Arkansas. He is a graduate of the University of Arkansas, and he did come up to Illinois and go to Northwestern University Law School—I had to put in that plug. He was city attorney for the City of Charleston from 1952 until 1970, and last fall was elected Governor of the State of Arkansas.

It gives me great pleasure to present to you the Governor of the State of Arkansas, Dale Bumpers. Governor Bumpers.

ADDRESS

The Honorable Dale Bumpers, Governor of Arkansas

Dr. Mangan, Mayor Wimberley, Bishop Keller, and Ladies and Gentlemen: I want to tell the visitors from out of the state, that the introduction by Dr. Mangan was true, the part about me being city attorney of Charleston, my home town, but I also feel that I should relate that Charleston is a town of 1491 people, and the reason I was city attorney for so long was that I was the total bar association in this community, so it was a dubious distinction, at best.

I have been amazed in watching these interpreters. Let me ask a question. I was wondering how many people here are totally dependent upon this interpreter? Would you hold up your hands. I just wanted to make sure we needed them.

Arkansas is honored to be your host for this important combined Conference of Educators for the Deaf. I welcome each of you and cordially invite those of you who have come from other states and other countries to the hospitality of our capitol city. I hope that you will also have the opportunity to visit and enjoy our parks and beautiful lakes, mountains, rivers, and many other attractions. Wherever you go in Arkansas you will find friendly people to welcome you.

I am honored that you have asked me here tonight. I am sure you are aware that I can't speak to you as one who is knowledgeable about deafness. I am only superficially aware of what physicians know about the causes and treatment of deafness. I have only a limited knowledge of what social scientists know about the personal and family adjustment problems caused by deafness. I am not familiar with the techniques of teaching deaf children or adults, or with their learning problems. This technical knowledge and ability is in your hands, and you fellow professional workers.

I speak to you tonight as the Chief Executive Officer of one of our 50 states, and, a governor's job, in my view, is to provide leadership in the state's efforts to build toward a society in which all citizens have the opportunity to participate and contribute to the fullest extent of their ability.

The right of all citizens to take an equal and dignified place within our society has not always been recognized. Only recently have we recognized that no citizen should be excluded from participation in the life of the community. Only recently has our society accepted the challenge that there should be no exceptions because of race, sex, age, or physical impairment. We have not yet tested the limits of our ability to include people in our society, who were previously left out—excluded simply by custom or tradition, rather than on legitimate bases.

The most important quality of a man in political life is his personal philosophy about people. If a man believes in the worth of the individual, and believes that the role of government is to create a climate in which the individual can have the opportunity to reach his full potential, then he will act in the interests of all people—including the deaf.

I am certainly not suggesting that we in leadership roles are not interested in the special problems of deaf people. On the contrary, we should lead in efforts to provide for their special needs, but we look to others to provide leadership and expertise in these areas. We search for capable men who share our philosophy, and then we give them our trust and support.

Some of you may know that we in Arkansas have reorganized our state government. A group of dedicated men head the 13 newly created departments. These men share my desire to create a climate of concern and opportunity for all our citizens. The reorganization gives us a greatly expanded opportunity to accomplish these objectives.

The interests of deaf people are not a single departmental responsibility and could not be met by any *single* program. Deaf people are citizens whose concerns are touched upon by *all* our departments. The Department of Education, and the Department of Social and Rehabilitative Services undoubtedly play the most responsible roles in the lives of our deaf citizens. These two departments, as well as all of the other departments, are headed by men upon whom our deaf citizens can rely for genuine interest in their problems.

I will not attempt to discuss the many fine programs for the deaf in Arkansas, or those programs we still need to develop. Many of you are from other states and would not find this particularly meaningful. I simply want to emphasize to each of you, wherever you are from, that your programs and the lives of the people you serve, are influenced by the political climate—and that the political climate is largely determined by the personal philosophy of your elected officials. It would be very dangerous to elect officials whose words or actions lead you to believe that they would ignore, degrade or repress any group of citizens in our society.

The second point I would like to make is that it is extremely important that you know how to make government work for you. Elected officials with the best intentions in the world can't implement programs that are not clearly defined and supported by the organized efforts of concerned citizens. There is an unbelievable competition for state funds. Your elected officials do not often have the luxury of choosing by personal analysis between a worthy and an unworthy cause. With rare exception, the choice must be one among *several* worthy causes. Unfortunately, political pressure and expediency sometimes enter into decisions.

I endorse the democratic methods that have been used in Arkansas in recent years to improve services for the deaf. I particularly commend the participants in the Arkansas statewide conference on Coordinating Education and Rehabilitation Services for the Deaf. This conference brought together approximately 70 leaders in the field of deafness, including several deaf people. The report from the Conference—"Deaf People in Arkansas in the 70's" has been widely distributed among responsible leaders in state government. The recommendations from the Conference will serve as one of the guidelines our departments will use in developing expanded programs for the deaf during the 70's.

I also commend those in Arkansas who participated in the statewide rehabilitation planning project. This group developed 19 recommendations that will also serve as guidelines for developing rehabilitation and other services for the deaf in Arkansas.

I urge those of you who have come from other states to become involved in similar types of citizen action planning. It is necessary that you continually work together as citizens to set forth your program objectives in this orderly form. You might say that this is Part 2 of the democratic process of government.

I know you have planning organizations in your states just as we have. Our comprehensive Health Planning Program and Statewide Rehabilitation Planning are but two examples of planning programs that are interested in and are available to help with the problems of deaf people. I suggest that you find out where these programs are located in your state, and seek to be included so that you will be able to make known the needs of deaf citizens.

I further urge you to work for the improvement of conditions for groups other than the deaf. You may be much more effective in helping the deaf if you are known for your broad concern for other handicapped or underprivileged citizens. It is very difficult to muster an isolated broad program of support for a group with highly specialized needs. You must join with others to work for programs that serve all handicapped persons and then make the additional special efforts needed to have those programs include services to the deaf.

You are educators of the deaf, but I know you recognize the deaf need more than education. They need a full range of community services. Don't hesitate to work for better mental health facilities, better facilities for the retarded, better juvenile court services, better recreation, and so on.

I encourage you to make your wishes known in government. In so doing, you should know that the days of individual political influence and personal favoritism are on the wane. Our governments are becoming increasingly attuned to the democratic processes of responsible organized citizen involvement and participation in the formulation of program objectives and priorities. The degree of success with this new approach will be determined largely by the extent of citizen participation.

In closing, let me again extend to you my invitation to enjoy Arkansas. I hope the personal perspective I have given you about the role of government and the concerned citizen will be of some value to you when you return home.

Dr. MANGAN. Thank you very much, Governor Bumpers. I am sure this spontaneous reaction of our group is an indication of how much we thought of the message you brought to us tonight. I think the level and tone of our Convention has been set, and well set by Governor Bumpers. We sincerely appreciate it.

MONDAY, JUNE 28, 1971

Program

Second General Session (9 a.m.) Parnell Hall Auditorium

Dr. Kenneth R. Mangan, Presiding

9 a.m. *Introduction of Speaker: Speaker:* John W. Melcher, Administrator, Division for Handicapped Children, Wisconsin State Department of Public Instruction. "Some Unmet Needs of Deaf Children".
10 a.m. Picture, Convention of American Instructors of the Deaf.
10:15 a.m. Picture, Conference of Executives of American Schools for the Deaf.

Multi-Handicapped (10:30 a.m.–4 p.m.) Lower School Auditorium

Chairman: Dr. J. G. Demeza, Superintendent, Ontario School for the Deaf, Belleville.
10:30 a.m.–11:45 a.m. Programs for Multi-Handicapped in Schools for the Deaf.
Chairman: D. E. Kennedy, M. Ed., Superintendent, Ontario School for the Deaf, Milton, Canada.

"The Exceptional Unit at the Arkansas School for the Deaf". Susan Porter, M.S.E., Supervising Teacher, The Exceptional Unit, Arkansas School for the Deaf, Little Rock, Arkansas.

"The Present Program at Milton". Gary H. Martins, B.A., Assistant Student Services Administrator, Ontario School for the Deaf, Milton, Canada.

1:30 p.m.–3 p.m. Programs for Deaf Retarded.

Chairman: Dr. Lyle L. Lloyd, Executive Secretary. Mental Retardation Research and Training Committee, National Institute of Child Health and Human Development, Bethesda, Maryland.

"Programming Considerations for the Deaf Retarded". Nona L. Burrows, Research Associate, Department of Special Education and Rehabilitation, University of Pittsburgh and Dr. Lyle L. Lloyd, Executive Secretary, Mental Retardation Research and Training Committee, National Institute of Child Health and Human Development.

"Current Trends in Services for the Deaf Retarded in Schools for the Deaf and Residential Facilities for the Mentally Retarded". Sylvia M. Hall, M.S., Austin State School Texana F. Conn, Registered Interpreter of the deaf Austin State School.

"Systematic Development of Communication Modes; Establishment of a Multiple-Response repertoire for Non-Communicating Deaf Children." Shirley L. Berger, M.A., Parsons State Hospital and Training Center, Parsons, Kansas.

3 p.m.–4 p.m. Forum on the Deaf Retarded.

Chairman: Dr. Lyle L. Lloyd. This session was used to further develop ideas of the previous session and provide a report of activities of the AAMD–CEASD Joint Committee on the Deaf-Retarded, with specific reference to future needs and projects, and was structured for audience discussion to obtain feed-back and ideas from the membership.

Discussants: AAMD-CEASD Joint Committee Jack W. Brady, Nona L. Burrows, W. Lloyd Graunke, Alfred Hirshoren, John G. Nace.

MONDAY, JUNE 28—SOME UNMET NEEDS OF DEAF CHILDREN

John W. Melcher, Division for Handicapped Children, Department of Public Instruction, State of Wisconsin

My speech today will reflect my biases as Wisconsin's state director of special education. These opinions have been developed as I have worked with our residential and day-school programs for deaf children for almost a quarter of a century.

Wisconsin has four million citizens, or about one-fiftieth of the U.S. population. We, in turn, have a typical distribution of deaf children and the usual variety of public and private services to serve them. Some of our programs are outstanding—others are less than ideal. Without exception the people serving the deaf children and their families are among the most committed professionals I've met in my quarter of a century in special education—and yet include some of the most rigid individuals when the matters of methodology and technology and delivery systems are discussed!

Today I will talk about five areas of special need for our deaf school-age group. These areas are:

I. Improved Identification and Diagnostic Programs for Deaf Children
II. Increased Educational Services to Very Young Children
III. New School Services and Training Programs
IV. Better Services to the Adolescent Deaf
V. Need for Research Priorities in Deaf Education

I want to discuss these five selected areas from the point of view of our constitutional and legal obligations, but also from the concerns of the heart. As I meet people in many walks of life, I find they fall into two primary groups. The first group, the *things people*, sees the world and its problems in a quantitative format. They express the problem as so many people with specific descriptors, costing so many dollars per capita, from so many communities and so on ad infinitum. These influential people seem to be equipped with built-in slide rulers or computers. We must relate to this group because they control the fiscal destinies of programs for the deaf. The group I prefer to work with are the *people people*. This group of citizens are first concerned about the needs of their fellow man and his happiness and success. I find teachers of the deaf on this side of the dichotomy I've drawn. They think first of children, then of the fiscal and other quantitive realities. A story that relates to this issue of concern for children might be appropriate at this point. The tale is about an over-burdened school psychologist who worked each day resolving the problems of children and their parents. After work and on weekends, he loved to don his dungarees and sport shirt and do things that call for muscle rather than brain power. One of his recreation projects was a backyard patio. The psychologist spent weeks getting the yard in shape for the final stage—the cement laying. At last the day came, and the cement truck poured the soft stuff into his carefully formed patio forms. As the job appeared to be finished and the surface was smooth and level, a four-year-old neighbor boy came charging out of his yard into the psychologist's newly finished patio area. The boy, of course, caused the area to become a mess. The professional man emitted a few choice four-lettered words with considerable enthusiasm. As he was expressing his feelings, the four-year-old's mother came out of her house with a rush. She said to the psychologist, "Dr. Brown, I'm astonished to hear a man of your child-centered background using such terrible language on my little boy!" The psychologist slowly pulled himself together and replied to the boy's mother, "Mrs. Smith, I Want you to know that I love children in the abstract—but not in the concrete!"

All of us are well acquainted with the person who loves to read hear about children but would rather not be personally involved [illegible] them.

My first area of concern is improved identification and diagnostic programs for deaf children. In general, I'm convinced school administrators don't try very hard to seek out children with special needs. Too often we hope they'll ultimately come to us without our seeking them out. Some general school administrators simply feel we shouldn't be looking for problems. In deaf education, we too are unwilling to invent programs for children with more than a problem of deafness. A mother of a young rubella deaf child with a myriad of complications said to me recently, "School people don't want to talk to me and help me resolve my youngster's problem." In full frustration she finally blurted out, "What am I to do with my boy? Drown him?"

We must multiply our efforts to find the young child with hearing loss. Schools will need to realize that five years is not the magic number for school entry of deaf children. School boards must receive state and federal fiscal and professional help to fully meet this need. In inner city areas, where health risks are greatest, we must put special emphasis on early detection via parent education programs related to O.E.O. activities and the public health services program of maternal and child health agencies.

A similar need for public education and early detection programs exists in our rural areas. While it is difficult to secure a large population of deaf children in a sparsely settled area, we in administrative responsibility must find ways of overcoming the incidence question. The use of helicopters and other unique means of getting children to diagnostic and routine therapeutic services should be explored now. The experimental use of radio and education T.V. should be explored for possible help to the young deaf child and his family in rural areas. Itinerant family counselors should be employed to travel to the homes of preschool deaf children on a planned, scheduled basis.

Another problem in early childhood programming is what I call "fractured services." Because of our fragmenting of programs, families must run from "pillar to post" to get the many services their young deaf child needs. The psychological exam is done at university A, the psychiatric exam at clinic B, the neurological exam at hospital C, the audiological exam at hearing clinic D and the educational assessment exam at school E. Families should have the opportunity to get these needed services on a planned integrated or limited basis as part of a regional or state program for preschool deaf children.

Family counseling for parents and siblings of young deaf children is also badly needed. To my knowledge, no secondary school in this country offers a course to its students that instructs future parents on how to adjust to the problem of having a deaf child in their family—nor should any high school be expected to offer such a course. However, when deafness strikes a child, state and local school agencies should secure the many counseling services, including genetic counseling, this young family so acutely needs.

To more accurately predict school and life success for the young deaf child, we will need to develop better instruments of measurement than are available today. During the past two or three decades we have invented very, very few new predictive devices or assessment tools aimed at the young deaf child. The whole question of predicting success with a particular mode of communication or instruction is but one area that has received only minimal attention from higher educational establishments. We know too little about how a deaf child learns and the critical variables to this learning. The whole field of the effect and the young deaf child also has been poorly explored.

My second area of concern is increased educational services to very young children. Up to now, public school agencies have been slow to muster financial resources directly to teach the two-, three- or four-year-old deaf children. This task has been left to hearing societies, correspondence programs or just not done! The failure of school systems to accept responsibility for the education of young children has occurred in the main stream of education, but O.E.O., Headstart, and private nursery schools, and other non-public facilities have partially filled the void. These non-public school programs have been created and operated by *amateurs* because the *professionals* in the public schools have neglected this critical educational area.

The first formal educational service of the public school system should be provided by a home visitation instructor who carries a pupil load exclusively composed of one-, two-, three- and four-year-old deaf youngsters. Her role is to provide direct teaching service that serves as a model for the child's family to emulate and to give educational information and counseling to the child's parents. This itinerant special educator also serves as the direct link to the classroom program that the child will be involved with eventually.

Special classes for the education of the young deaf should be related to school supportive services for the deaf and should be staffed by specially trained teachers of the deaf who know the latest prescriptive teaching methodologies and practice them. In my bias, we need to have new special training programs for teachers of young deaf children. The flood of new knowledge and technique in this field is of such magnitude that a sub-section of the college or university special education training program should be developed. The day of training teachers so generically that they can teach two-year-olds or twenty-year-olds is gone!

Another special need in early childhood education of the deaf is the one that relates to special programming for the deaf with additional handicaps. To meet the problems presented by the deaf child who is also retarded, disturbed, visually or physically impaired, we will need to develop special education programs to manage these youngsters' unique and trying problems.

To accomplish this end, greater use of paraprofessional personnel will be required in the school setting. These paraprofessionals will need to be *more* than "well intentioned." These key workers will need both special pre-service and in-service training experiences that are closely coordinated.

My third area of concern is improved curricular planning and organization. To me curriculum should be related to the life needs of the person taught. This implies that the learner is more important than the teacher as far as curricular content is concerned. In my bias, I advocate that we first analyze what deaf people need to succeed socially, emotionally, vocationally, and intellectually in our society and then work back from the deaf child and adult to the teacher and then to the teacher trainer. Too many times today the pattern is reversed! Frequently, the college tells what should be taught to the classroom teacher who in turn passes on this subject matter to the deaf child whether he needs it or not. More attention must be paid to the recipient of the instruction, and the use of behavioral and curricular objectives must be stressed in the training of teachers of the deaf.

School programs in residential schools and local public schools must be brought closer together and curricular planning should be a joint project for these two primary segments of deaf education. The flow of students between "day schools" and the "residential schools" will increase markedly in the next decade, and we must assure deaf students that the learning they have received in one setting will have utility in the other. Statewide curriculum planning should be expanded to include all who are involved in the education of the deaf, including public schools, private schools, day schools, residential schools, "oral" schools and "total communication" schools!

I see in the immediate future greater emphasis on oral methodology in our residential schools for those who can profit by this mode of instruction, and I see the development of special "non-oral" classes in our day schools for those youngsters who do not respond to oral methodologies.

The next ten years will see the development of paraprofessional staff in our deaf programs that will provide the deaf pupils with better personal care, improved material of instruction, and supportive services such as tutoring and individually guided programmed learning.

In this same vein, I would advocate a greatly increased investment in materials of instruction that are multi-sensory in nature. Special instructional material centers should be accessible to all classrooms for the deaf via a state or regional network. Most states should provide this service as part of the total state deaf education network and can call on P.L. 89–313 and Title VI, ESEA funds to finance the related costs.

Expansion of the school year to 11 or 12 months must be investigated. For a deaf child to remain idle during a two-to-three-month period each year is unsatisfactory. Summer programming, while essentially educational in nature, can be offered in such pleasant surroundings as residential or day camps. The curriculum can swing from the orthodox classroom subjects of reading and arithmetic to the most realistic application of their academic skills and the equally important affective behavioral skills in the relaxed and pleasant outdoor-oriented camp setting.

My fourth area of concern is greater attention to the needs of the adolescent deaf. Too many times I feel we give up on academic skill development for the adolescent deaf. I've heard for years—"Everyone knows that all you can expect from an average deaf high school graduate is fourth to eighth grade achievement." While I do not have the remedy for these underachievements, I strongly feel that we may have undersold the deaf youngsters' potential and quit trying too early. When I see five-year-old deaf children of normal intelligence produce speech and finger spelling, when I see them able to cope with the rudiments of phonetics, and when I see them do cursive writing, I can't be convinced that these same youngsters can't be taught—somehow—to achievement beyond the eighth grade level by the time they reach adulthood.

Vocational education of the deaf must be improved! For too long we have hoped someone in general vocational education would assume these responsibilities, and they haven't. Each state should on its own or in combination with its neighboring states develop a comprehensive vocational education program for the deaf that assures each deaf adult the opportunity to work gainfully. The state residential school(s) has the greatest responsibility in this regard in most states. While I do not oppose the use of community vocational education resources, I do say we in education of the deaf must assume ulitmately the responsibility for this problem whether we get help from the general education system or not!

Community work-experience programs for the adolescent deaf must be arranged for both the day and residential school pupil. Too many times a work-experience program is limited to the school building or the school campus. For our deaf youth to be competitive in the general labor market, they should be exposed to the broad community before we finish our educational involvement with them.

To keep our vocational and pre-vocational programs realistic and relevant, we must do more "talking" with well-adjusted and adaptive deaf adults as well as with our colleagues in vocational rehabilitation who can tell us what we are doing that is productive in the "work-a-day" world and what we might do to develop greater social and vocational competence in our deaf pupils.

Direct pupil counseling by vocational counselors as well as psychologists, social workers, and psychiatrists also needs to be expanded and improved. I'm very concerned about the relatively small amount of provision we have made for the mental health problems of our adolescent deaf student population. It is rare to find a school for the deaf that has made even the most modest provision of mental health services.

My last area of concern today is research and research priorities. Up to now most research on the education of the deaf has been carried out by capable individuals who have done research in areas of their own primary interests. Very little of the research done in deaf education up to now has been of the so-called "commissioned or contracted research" variety. The day of federal financing of research on the "laissez-faire" basis is coming into "hard times." Congress is expecting a measurable difference in our educational processing as a result of their investment in educational research. They want us to show progress in a relatively short time and have this progress be reflected at the individual child level.

To better use the limited dollars available, we in the field need to *aim* our research efforts rather than allow them to sail freely at random. I predict an upswing in the quantity of "commissioned research" similar to that which has evolved from the successful models in the NASA space effort or the applied research programs of industry. I sincerely hope that groups like C.A.I.D., N.A.C.E.D., and others will bring our profession together to delineate the areas of greatest urgency in the education of the deaf and then convey with conviction these priorities to the federal agencies that administer federal educational research dollars.

In closing may I say that deaf education has been virile, aggressive, well received and well financed because it is well organized. In the future if we hope to be as successful, we'll have to adapt to the times, close the ranks, de-emphasize differences, communicate with parents and other supporters and maintain our sincere preoccupation with the needs of the deaf child.

THE EXCEPTIONAL UNIT AT THE ARKANSAS SCHOOL FOR THE DEAF

Susan Seeger Porter, M.S.E., Supervising Teacher, Arkansas School for the Deaf

Hopefully the convention theme, "More opportunities for deaf children," includes all deaf children, even those with handicaps in addition to their deafness. These are the children we are concerned with at the Madison Street School, here at the Arkansas School for the Deaf. The children in our department have such additional handicaps as cerebral palsy, brain damage, mental retardation and visual problems, plus some slowlearners and a large group of children entering school at a late age.

The philosophy of our department is never to give up on these children and never to underestimate their abilities.

The video tape now displayed is proof of this philosophy. It includes an acrobatic dance by one of our girls who tests out as low educable and a tumbling routine by six of our boys. At the end of the tape you will see the rest of the children in our department.

We are all concerned about the rising number of multiply handicapped children, but rather than looking at the statistics, we at the Madison Street School are primarily interested in what can be done for these statistics.

We would like to share with you some of the reasons we feel our program is working and also tell you some of the problems we have encountered.

Any program is only as good as the people involved and I strongly feel that the staff is responsible for the success of our school. There seems to be the eternal question of, "Do you put your best teachers with the slower students who need the most help, or do you put them with your faster students?" All too often the brighter students seem to end up with the best teachers, but in our department we have the best. Over the past 5 years our program has grown from a 1 teacher department to a 10 teacher department and we have been able to select ideal teachers as we have grown. Ideal, meaning people who are energetic and like a challenge. People who don't just give what the job requires, but give the extra attention that means so much. These characteristics are not only found in our teachers, but in the houseparents, food workers, maintenance personnel and office staff as well.

When children enter the department we usually have their background and various test results, but we have learned never to judge a student by these. Often these files are his most serious additional handicap because of statements such as, "This child is severely retarded," or, "this child will never learn to be self sufficient."

The first big decision about our academic program was to forget the argument of oralism versus manualism. Our method is the "Anything Approach." Do anything necessary to get the message over to the child. We strongly feel that the child is only a whole person when he learns a means of communication;

In the academic program many approaches have been tried. Some have failed, but we have even learned from these failures. There is very little printed material available to be used by the multiply handicapped and at times we feel like pioneers.

Individualized teaching is the key to the program and it is used at all levels. For this reason five pupils is the ideal size for a class, but we have grown so fast that it has been difficult to keep them this small. The classes are grouped according to abilities rather than chronological age.

One problem area, academically, is a good reading program. We have been unsuccessful in finding a reading series to suit our needs, so we use a combination of several, but rely heavily on teacher-made materials, such as experience charts. The results indicate that this method is working.

Language development begins the first day as it does in any class for the deaf. The Fitzgerald Key is developed from that time on and Croker, Jones and Pratt is used for reinforcement in the upper classes.

Unit teaching is used throughout the department. These units are based on everyday living experiences and are backed up by all types of visual aids. Here again nothing is as successful as teacher-made materials. In the near future we plan to draw up a guideline of units to be used at all levels.

It has been difficult to develop a course of study, because the needs seem to change as the students change. We find that weekly plans can be used for the same purpose.

Another important aspect is to give the children actual experiences to reinforce what has been taught. It isn't usual to see one group of children processing vegetables for the freezer that they purchased at the local farmers market or to see another group planting green beans, tomatoes and peppers. The bus and station wagon are constantly on the road taking groups on field trips.

Throughout the program we have tried to create an atmosphere of freedom. This does not mean that the program isn't well planned, but that the children are also given the privilege of doing things they want to do. One class is designed solely for this purpose and all of the children rotate to it once a day. In addition to this we have physical education classes and dancing classes, the results of which you saw on the tape.

As the program grows we are trying to focus our attention on the ultimate goals of each child. We feel that each child can become a useful citizen and a wage earner or at least a useful family member. Most of our students enter the Vocational Department when they become of age but we are increasingly aware that we must find more vocational classes to offer children of limited ability. One group that vitally concerns us is the physically handicapped. Even though some of these children are our brightest, the combination of the two handicaps makes it very difficult to find a vocation to suit their abilities.

Extracurricular activities play an important role at the Madison Street School. Many of the activities are for only one purpose and that is fun. For the past four years federal funds have been used to employ a young man as a Homelife teacher. This person carries out planned recreational and educational activities after school hours. I attribute the low number of discipline problems to this program.

We have to depend on outside agencies to do most of our testing and often it takes much longer than we would desire. We still feel that one of the best methods to measure achievement is through daily observation, and based on this we enter every student on a 9-week trial basis. At the end of this period a staffing is held to decide if the child is placed correctly.

The children are referred from other agencies as well as other departments in the school and we have to be very careful that behavior problems and learning problems aren't confused. Often a behavior problem is brought on by a learning problem, but it would be very easy for a program of this type to become a "dumping ground" for behavior problems.

The stigma that has been attached to our department is a major problem. We are trying to overcome this by satisfying the parents with their child's progress and by trying to educate others as to the purpose of our program. Unfortunately there are even staff members in other departments who do not understand the program. One department head scheduled her teachers to come and visit, which was a good idea, but we get the best results by seeing that our children take part in every possible activity and making sure that they look their best.

Another pressing problem is our rate of growth. This past year we had an enrollment of 55 and next year it will probably increase to 65. Of course we feel it is important to grow, but we feel that we will lose some of our effectiveness if we grow too large.

The last and most frustrating problem is the fact that after five years of success, there are still many people, some in key places, that do not see the necessity of a program of this type and do not give it their support. Those of us involved in the department have no second thoughts. We have seen much progress, in fact a few miracles. We know that these children can learn and we feel that they deserve the same opportunities as other deaf children.

THE PRESENT PROGRAM AT MILTON

Gary H. Martins, Assistant Student Services Administrator, Ontario School for the Deaf

During recent years there has been a growing concern among educators of hearing-impaired children in Ontario, that the number of multiply-handicapped hearing-impaired children is increasing at a dramatic pace. This increase may be due to new techniques in medicine, improved prenatal care, improved nutrition and education, and extensive research into the etiology of deafness. It is also likely that improved diagnostic procedures are enabling us to recognize more of these children and to provide better assessment of their needs. Children who may have been misdiagnosed in the past are now being discovered and are entering our program. As a result, we have multiply-handicapped hearing-impaired children in our program ranging in age from 5 months to 20 years.

We are now faced with the challenge of developing adequate programs to assist these individuals in reaching their potential academically, vocationally, socially and spiritually.

The Ontario School for the Deaf, Milton, has been embarked upon a program for these children during the past seven years. This program has been possible due to the expansion in facilities in Ontario when the Ontario School for the Deaf, Milton, was built. With the opening of this school, pressure on the Ontario School for the Deaf, Belleville, was lessened and more multiply-handicapped hearing-impaired children entered the program. The Milton schools is a modern complex with up-to-date equipment and facilities on a 100-acre site. It has a staff of 330 with approximately one-half of that number working in an educational role providing a program for almost 600 children.

The entrance requirements for multiply-handicapped children are gradually becoming less restrictive as our program develops and our staff are capable of handling more challenging children. Orthopaedically-handicapped children must be ambulatory. However, this is quite flexible and we now have one paraplegic child at our school. Retarded children are accepted to the level of I.Q. 50 or trainable retarded. Emotionally disturbed children are accepted on an individual basis, usually after case conferences have been held with the admitting agency and our staff. We have many different types of handicaps under the broad classifications of social, mental, emotional and physical handicaps. We are gradually realizing that these children have as great a need or even a greater need than children with one handicap. We have the facilities and we have recognized our commitment. We are now trying to do something for these children.

PRESCHOOL

In our Preschool we are attempting to have these children enter the program at as early an age as possible. They enter our preschool program as early as five months and receive their program from five preschool teachers of the deaf who have been trained at the John Tracey Clinic after receiving their Teacher of the Deaf training in Ontario. The children are visited two out of every three weeks by the teachers and next year they will be visited every week.

The primary role of the preschool staff is parental counseling. Parents of multiply-handicapped children require this counseling help more than anything else. The teachers help to arrange for assessments in all disciplines, co-ordinate the efforts of the various agencies involved and provide encouragement and basic knowledge about the handicaps for the parents. The staff work with the Children's Psychiatric Research Institute, kindergarten teachers, Children's Aid Societies, Crippled Children's Centers, nursery schools, public health nurses, the Hospital for Sick Children and mental retardation centers. They work with these children even though there is sometimes doubt on the part of all concerned whether the child will enter our school program. We are presently working with the parents of one child who is likely severely sub-normal in intelligence and will likely have to be institutionalized in an Ontario Hospital. We continue to work with these children because as our program becomes more successful we will have greater success and be able to reach more severely handicapped children. The key to this success lies with the staff and the development of adequate programs.

The second role of the preschool staff is conceptual development and auditory training for the child. The third role of the preschool staff is the provision of further assessment and referrals. Our audiologist and often our psychometrician provide audiological and psychological assessments every year.

SUPPORTIVE SERVICES

One of the most difficult tasks we have had has been the development of an adequate supportive services team. Our present staff consists of a General Practitioner, Ophthalmologist, Otologist, Dentist, Psychiatrist, Psychometrician, Social Worker, Guidance Worker and an Audiologist. This team works very closely with the Children's Psychiatric Research Institute, a Physiotherapist, Crippled Children's Centers, Probation Officers, the Courts, Indian Agencies, Children's Aid Societies and the Hospital for Sick Children. Case conference techniques are used extensively with the supportive services staff, teaching staff, residence counselor staff and supervisory staff, to assess the program for each child and to revise it when required. In addition to the problem of getting people in each of these fields, there has been the problem of obtaining staff who are aware of the needs of hearing-impaired children. As a result, we have found it ncessary to hire specialists and then provide the training and experience necessary in the field of deaf education.

JUNIOR SCHOOL PROGRAM

This section on the Junior School program was prepared by Mrs. Juanita Sears, Supervising Teacher, Junior School.

Here are some of our children. Our very special ones, too often our hurt ones. The children who are looking to us to fit them into our fast moving, confusing world. The upset ones. The withdrawn who wait for us to draw them out into society. The frustrated whose physical make-up demands great powers of concentration to perform tasks usually taken for granted. The socially immature. The physically handicapped whose endurance is an inspiration to all. The perceptually disturbed—with poorly established body image. The timid—wanting to join in but usually found on the sidelines. The ones with language problems who with teacher initiative and special equipment can remain in a regular program. The hyperactive who are always on the go.

To realize one's potential as a member of the human race one must be able to use a language form to reason abstractly. To use this abstract media, i.e.: language one must first pass through all of the lower stages of development of the infant. If even one such developmental stage is missed or is poorly integrated into the body scheme it appears that a weakness may appear at a higher developmental stage. As a preventive measure with these children we are leaving nothing to chance and are taking them back to the primitive beginnings of growth. By following some of the ideas of Dalacato [1] and Kephart [2] we hope to strengthen weaknesses of body concept, positioning in space, time-space relationships, directionality, eye-hand co-ordination, progressive eye movement, depth perception, visual perception and auditory perception. Our program of physical instruction is aimed to present a program for each child in a social setting where he can master these skills at his individual rate of progress.

Before a child can be expected to verbalize in this abstract form we call language, he must be able to see himself in his world and understand how he fits into it. Many of the most basic experiences of childhood have not been integrated by these children. They need a huge storehouse of structured experience backed by a great deal of interpretation and guidance in follow up activities to integrate these into a meaningful source from which to draw in the future. One of the earliest checks to see if these experiences are fully integrated is dramatization. Through role playing the children can relive a situation and fit themselves back into it. They can explore the possibilities of the situation drawing from previous related experiences, take on the feelings of others, broaden the drama as the situation demands, all through the child medium of play.

As the child becomes more able through large body language to express his thoughts he should be encouraged to venture into drawing pictures—his first expression in abstract communication. Dramatization should be encouraged and concrete materials available to back up his pictures which at first will be difficult at best to decipher. Only through clear insight and a great deal of empathy on the part of the teacher will the correct message be reinforced. It is vital that the teacher be absolutely accurate as far as she goes in her interpretation of the picture. One word accurately given is far better than a broader concept if even a glimmer of doubt as to meaning is in the teacher's mind. Misinformation at this early stage is harmful to an already confused child. Time—that is the key word here. The many minutes spent in resolving one minute bit of expressive language at this stage are repaid many fold by not having to re-teach a faulty concept.

As the ability to express oneself non-verbally becomes more refined the child is ready to begin pre-reading skills. Awareness of likeness and differences, omissions, categorization of pictures as to kind, sequencing and word matching are all part of his required reading readiness skills. Books with high interest and low vocabulary load are introduced as soon as the child can master the vocabulary. From here, the child is able to slowly progress to higher reading skills.

We have found Dr. Stott's reading kit [3] very beneficial to some of our children. The material is progressive, selfchecking and aids in better social learning for a group. The children have found it both challenging and rewarding.

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[1] Delacato, C. H. *Neurological Organization and Reading* Charles C. Thomas.
[2] Kephart, N. D. *The Slow Learner in the Classroom* Charles E. Merrill.
[3] Dr. Stott, Department of Psychology, University of Guelph, Guelph, Ontario.

Many of our children have benefitted from a variation of the McGinnis method of presenting phonetic sounds. Training is four fold (1) he sees the sound, (2) he listens to the sound, (3) he writes the sound, (4) he says the sound.

Supportive help is given on specific learning difficulties to any child requiring this so that he can function as long as possible in a regular hearing-impaired class.

These are our children who are calling out their needs. Their means of expression may not be conventional but each one knows the area in which he is struggling. We must listen to their message with our eyes, minds and hearts. Leaving out any of these channels may cut off communication and push their problems out of our view and delay our help. Losing ourselves in any of these avenues equally delays progress. The child sets the pace and outlines the course. The perceptive teacher interprets the message and charts the route to a better adjusted child.

SENIOR AND VOCATIONAL SCHOOL PROGRAM

Throughout our school, many of the multiply-handicapped children are integrated in the regular stream. Often special timetables are designed on an individual basis to facilitate this integration allowing each child to work at a level according to his or her own ability. Parapatetic teachers work with children on a one to one ratio and tutorial classes with a low pupil: teacher ratio are provided. Class sizes have varied from two to nine pupils during recent years. Because of this flexibility in timetabling and programming, we feel we have been able to integrate many of our children who otherwise would have had to be segregated into special class placements. Most of our orthopaedically handicapped and emotionally disturbed children have been successfully integrated into the regular programme with special assistance being provided.

Throughout the senior departments of our school, our communication policy has been flexible. The range of needs by our children can best be described as a continuum. At one end of the continuum is a total communication policy and at the other end is a completely oral policy. Each child's needs lie somewhere on this continuum and we attempt to meet these needs through the use of oral and total communication policies. Where total communication is used, the staff are thoroughly proficient in its use. Although it is difficult to control the use of total communication, we feel that every effort must be made to reach the individual needs of the multiply-handicapped children.

Because we have a flexible program and integrate many of the multiply-handicapped children we have been able to achieve greater success with the moderately handicapped. One of our graduates had a special talent in art and his program was designed around these talents. Tutorial work with a professional artist and cabinet making with a bent towards wood sculpture helped to develop his talents. After our school he entered a three-year art program at a technical institute and is now entering a community college program in photographic arts. Although he has been assessed as being profoundly deaf, of limited intelligence and has an emotional and social handicap, this young man is reaching his potential and is a useful, supporting member of society with a sense of fulfillment.

Approximately 40 of our students are severely multiply-handicapped, many of whom have three to five handicaps. For example, one of our students is visually handicapped, profoundly deaf, orthopaedically handicapped, has an emotional problem and is socially retarded. We have found it necessary to segrate these children into special classes with appropriate programmes. There are five learning areas for boys and girls in the senior departments. Each area contains academic and vocational areas in close proximity so that lesson topics can be completed, developed, furthered and supported in the other area. A few steps away from the orthodox classroom is a vocational area in which individual work benches, hand tools and simple power tools are located. The vocational areas are quite large since as the children grow older, the vocational and social educational programmes take ascendancy over the academic. The girls' areas contain kitchen, laundry, sewing, beauty culture and apartment areas. Flexibility and interplay among the various programs is followed.

Education in these classrooms leans heavily towards socialization skills. All of the academic and vocational skills taught are the basic social skills which are normally never taught in a regular formal program. How to count change, cross a street, dress, wash properly, cook simple meals, buy food and clothing, buy a ticket for a train, plant seeds, hoe a garden, change a tire, glue, measure, tell time, choose the correct washroom and cash a cheque are just a few of the many skills taught. Along with these skills the language of the skills is taught. If you were to visit one of these classrooms you could find the teacher and pupils raising chickens, boiling down maple syrup, bagging trees for the conservation authority, engraving trophies, repairing toys, going fishing, planning a meal, learning how to put a diaper on a baby, operating a small bakery or builidng a doll house. Team teaching is used effectively and teaching is not limited to the classroom. On-the-job training has become an extensive part of the program. The school laundry, kitchen, trades, offices, maintenance, infirmary and gardening staffs are an integral part of the program. The pupils gain a variety of experiences and learn new skills which can help them to gain useful employment in the future. Perhaps the most important skill learned is the ability to work with others and the realization of what work is all about. We have been pleasantly surprised at the ability shown by some of our multiply-handicapped students when placed in on-the-job training. Some of our students have been gainfully employed upon graduation in areas relevant to their on-the-job training. We believe in the ability of our multiply-handicapped children and feel that they have a great deal to contribute to society. We have hired several of them to work at our school. Without fail, all of our multiply-handicapped graduates who have been employed at our school have been excellent, responsible workers who are happy and feel pride and fulfillment in life.

PHYSICAL EDUCATION AND SWIMMING

The philosophy of Physical Education, Swimming and Recreation at Milton is quite different from the traditional North American philosophy of Physical Education. The majority of our students will not play organized football, baseball or basketball after they graduate. They will, however, play recreational sports such as golf, racquet sports, ping pong, bowling, skiing and camping. Therefore, our program for the majority of students is based upon the future recreational needs of the children.

We also believe that Physical Education and Swimming can augment the formal educational process in the classrooms. Many of our children have gross motor, eye-hand co-ordination, temporal-spatial, laterality, body image and directionality problems which seriously affect their classroom performance. Recognition of these problems and remedial programs are an integral part of the program. Therefore creative movement, dance and gymnastics based upon modern English and Swedish movement theory play a large part in the programme. Many of the social skills such as cutting with a knife and fork, tieing one's shoe laces, dressing and grooming are related to physical skills and body awareness. Children without these skills find it difficult to remove a pie from a hot oven, saw a straight line, measure, type or even make a bed properly. Physical Education can, therefore, help these children perform social, academic and vocational skills which are very necessary in life.

The Physical Education staff work with a teacher: pupil ratio of 1:8 for 80 minutes per child per week. The emphasis in this program is placed upon educational, social and recreational skills rather than team sports. In the after-school program teams are developed and a recreational program of intra-mural sports is provided.

The Swimming program appears to be the area in which the multiply-handicapped children excel. This highly individual sport is particularly suited to our orthopaedically-handicapped children. There is excellent co-ordination between the physiotherapy department and our staff. The physiotherapy programme is carried on all week with the pool staff and the children.

With our multiply-handicapped children the teacher: pupil ratio is seldom greater than 1:2 and the children therefore receive a great deal of physical contact and individual attention from the staff. Swimming skills are readily mastered by multiply-handicapped children and they receive a sense of accomplishment for their efforts. Where a multiply-handicapped child might find it very difficult to master daily skills on a level with his hearing-impaired peers, he can readily perform on the same level in a Swimming program. We have a marathon club in which pupils swim lengths of the pool to achieve awards for swimming a designated number of miles. It is particularly rewarding to note that in this voluntary club there are a number of orthopaedically-handicapped youngsters who have achieved a very high level of success. The key to the program with the multiply-handicapped is the need to base the teaching and methodology upon the needs of the individual child and to provide adaptive and flexible programs.

RESIDENTIAL

Whenever the educational needs of children are being discussed, it is natural and almost universal to immediately think of only the formal educational process. This, unfortunately, is incorrect thinking since the majority of a child's education is provided in the home. It has been said that the greatest educator in the world is a child's mother. Therefore it is important, when considering the educational needs of multiply-handicapped children, to examine the program offered in the home, or in our case, the residence.

Although the educational process in the residence is not highly structured and does not have certified teachers, classrooms, homework and a timetable, it does fulfill the very important role of providing for learning and development in the socialization process. For multiply-handicapped children this is often the most important educational need of the child. The children are in the residence approximately 75 percent of the day. Therefore, with good programs the residence can become an integral part of the educational process at a residential school for hearing-impaired children.

We are attempting to provide this program residentially for our multiply-handicapped children. Through the use of educational toys and games, educational excursions, arts and crafts programs, recreation and counselling, the residence staff are able to augment the formal educational program and provide a learning environment for the children. With the multiply-handicapped children we have found that we obtain greater results when the staff meet in conference and design a program based upon realistic aims and objectives for the child. One orthopaedically-handicapped child who had been transported about in wheelchairs, on special bikes, in taxis and on toboggans had become extremely dependent upon the staff for most of his daily needs. This year the staff planned a program based upon a set of aims and objectives. In a short span of six months that child has become independent to a great extent. He has almost given up his crutches, no longer asks for transport, works hard at using language and the change in his personality is amazing. There is no room in our program for a benevolent attitude based upon pity and sympathy for a multiply-handicapped child.

We have found it necessary in the residence to plan our programs for each multiply-handicapped child in co-operation with the other school departments and with developed aims and objectives. It is important to measure the social development of each child to assess the program being provided. We have found a modified Gunzburg Wheel [4] to be a useful tool for measuring this development.

Since we started providing a program for these children, we have found it necessary to develop a very special type of residence counsellor staff. They need greater training beyond that previously provided to deal with hearing-impaired children. They must now be able to handle emotionally disturbed, retarded and orthopaedically-handicapped children. Therefore our training program for residence counsellors is now developing into a solid, two year in-service program with formal classroom and seminar work for the two years. The houseparent role is gone. The day of the residence counsellor charged with the responsibilities of the educator, houseparent, counsellor and surrogate parent is upon us. For the multiply-handicapped children in our care we must provide educated and well-trained residence counsellors to meet the individual needs of the children.

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[4] Gunzburg, H. C. *Social Competence and Mental Handicap.* Baltimore, The Williams & Wilkins Company.

In summary we have really done only three things for the multiply-handicapped children in our care. First of all we have recognized their needs and have made a commitment on our part to meet these needs. Secondly, we have admitted these children to our school. This perhaps is one of the greatest hurdles. Thirdly, we have attempted to develop a program for them. We have really cleared only the first hurdle of a long series we have begun. We have many needs to fulfill in the future. We need better training for our staff. We need more supportive services direction and help. We need better defined programs. Hopefully, we will continue to recognize our commitment to meet the needs of these, our children.

PROGRAMMING CONSIDERATIONS FOR THE DEAF RETARDED

Nona L. Burrows, M.S., University of Pittsburgh and Lyle L. Lloyd, Ph. D., National Institute of Child Health and Human Development, Bethesda, Md.

There is a growing demand for expanded services in the treatment, education, training and habilitation of multiply handicapped children. The ever-increasing number of multiply handicapped children posses a major and presently unmet challenge to those in the field of special education. Within this group of multiply handicapped children are those with the dual disabilities of hearing impairment and mental retardation.

The exact incidence of hearing impairment among the mentally retarded varies due to factors such as hearing loss criteria, audiometric techniques used, and the atypical behavior of the children being tested. However, the research literature contains considerable evidence that the prevalence of severe hearing loss is high among mentally retarded children (Lloyd, 1970). Using a common criterion, such as an average threshold of 25 dB HL (1969 ANSI or 1964 ISO) or poorer for 500, 1000, and 2,000 cycles per second (cps) or Hertz (Hz) in the better ear, approximately 10 percent of retarded children have a communicatively and/or educationally significant hearing impairment. This is approximately three to four times the incidence of hearing impairment in non-retarded children. When unilateral losses, which may be both communicatively and educationally significant, are considered, the incidence figure of hearing impairment among mentally retarded children is approximately 15 percent. Estimating approximately 2.8 million retarded children in this country, this means between 280,000 and 420,000 retarded children have communicatively significant hearing losses (Lloyd, 1970; 1971).

This higher incidence of hearing loss seen in the mentally retarded is understandable since many of the diseases which result in mental retardation are also causal factors in hearing impairments. Diseases or conditions in the mother during pregnancy such as rubella, influenza, and Rh factor) and diseases the child may contract in childhood (such as measles, mumps, scarlet fever and meningitis) can all cause mental retardation or hearing loss, or both. The rubella epidemic of 1964-65 has added thousands of children to the list of those both retarded and deaf. Furthermore, retarded children have a high incidence of diseases and infections, especially of the upper respiratory type, and consequently have an increased probability of related conductive hearing impairments such as otitis media. Many retarded children have poor self care skills which may also result in hearing problems and may compound the effects of such conditions. In addition, the reduction in infant mortality rates due in large measure to the research in etiology and treatment of diseases has resulted in a higher incidence of children with multiple handicaps including the hearing-impaired-mentally retarded dyad (Lloyd, 1970; 1971).

Neither administrators of programs for the retarded nor administrators of programs for the deaf have made a major thrust to solve the problems of the deaf retarded child (Anderson, Stevens and Stuckless, 1966; Hall, 1971; Mitra, 1970).

Many schools and classes for the deaf have attempted to provide for the needs of the *educable* retarded deaf child within the framework of their normal programs (Power and Quigley, 1971). It seems to be generally agreed that the best policy is to keep these children as close as possible to the normal stream of deaf children through appropriate modifications of curricula (Weir, 1963; Monaghan, 1964). Sellin (1964) has stated that the curriculum for such children should not just be "watered-down" versions of the regular curriculum, but should be specially devised to meet their special academic, vocational, and social needs.

A study by Anderson, Stevens, and Stuckless (1966) investigated provisions for the education of deaf retarded students in residential schools for the deaf. It was found that most schools for the deaf provide educational services for deaf children with below average intelligence, as long as the child's "primary disability" is deafness. The schools had very few children with I.Q.'s below 60. In most residential schools, the deaf retarded students follow essentially the same curriculum as do normal deaf children.

Although there is a general acceptance by educators of the deaf that there is a need for specialized educational services for deaf retarded children, eudcators are uncertain as to the specific objectives for educating deaf children with low intelligence and the methods by which these objectives can best be realized. Teachers have expressed concern about their inadequacy to teach deaf retarded children and are uncertain about the kinds of training which they feel would be beneficial to them.

Trainable retarded deaf children are usually found in state institutions for mentally retarded individuals rather than in schools for deaf students (Power and Quigley, 1971). In general, the feeling seems to be that state institutional placement should be reserved for those children who will be incapable of leading independent adult lives (Schunhoff, 1964; Mangan, 1962, 1964; Monaghan, 1964).

Mitra (1970) explored provisions for mentally retarded deaf students in residential institutions for the retarded. He speculated that not more than 25 percent of the existing institutions have established specific programs for the deaf retarded. An anlysis of the program objectives for deaf retarded children revealed three most common goals: communication skills, social adjustment, and academic skills in rudiments of tool subjects. Some of the institutions have also provided educational work-experience programs. At least 50 percent of the teachers surveyed in this study have no preparation for working with the deaf.

Suggestions for the teachers for their professional preparation include: advanced studies in certain specified fields, practical training to teach certain categories of exceptional children, and proficiency in communication skills for deaf retarded children.

MacPherson states that programs for the deaf retarded cannot be fully implemented unless: (1) properly trained teachers are available, (2) placement is based upon a differential pattern of diagnosis and (3) curriculum adopted by the placement facility is based upon the needs of the multiply handicapped child (Sellin, 1964).

Leenhouts stresses that there is a need for systematic research to provide objective data to guide educational practice in providing programming for the deaf retarded. (Sellin, 1964).

Services provided by audiologists, educators of the deaf, speech pathologists and psychologists are a critical part of programming for the hearing impaired mentally retarded child regardless of the setting (school for the deaf or facility for the retarded).

A complete audiologic assessment is essential in providing information regarding characteristics of the hearing impairment, including the feasibility of amplification. Extensive reviews of the audiologic assessment of the retarded and other difficult-to-test individuals have been previously presented (Fulton and Lloyd, 1969; Lloyd, 1970). The audiologist along with the educator and speech pathologist also have a critical role in assuring optimal use of amplification both in and out of the class (and/or therapy) situation. These three professionals all share in the evaluation and habilitation of communication disorders. The educator of the deaf provides critical expertise in the area of both oral and non oral communication methods. Although all three professions share in communication habilitation, in the past the deaf-retarded services in schools for the deaf were provided primarily by educators while such services in facilities for the retarded have tended to be primarily provided by audiologists and speech pathologists.

The psychologic evaluation provides useful information about intellectual and behavioral functioning. Though a verbal intelligence measure may be obtained for some children for the purpose of ascertaining their verbal functioning, a non-verbal or performance type instrument should be used as the principal estimate of intellectual aptitude. A test standardized on deaf children, such as the Nebraska Test of Learning Aptitude or the Leiter International

Performance Scales, would likely yield more valid results (Brelje and Wolff, 1969; Vernon and Brown, 1964).

Vernon and Brown (1964) in discussing psychological evaluation of hearing impaired children stress the following:

1. To be valid as a measure of the intelligence of a deaf child, an I.Q. test must be a non-verbal performance-type instrument.
2. The performance part of many conventional intelligence tests is only one-half or less of the test. Therefore, to approach the validity of a full I.Q. test, it is necessary to give at least two performance scales.
3. Tests given to deaf children by psychologists not experienced with the deaf or hard-of-hearing are subject to appreciably greater error than is the case when the psychologist is familiar with deaf youngsters.

Several psychological tests which might be considered for use with the hearing impaired mentally retarded are briefly discussed in the following three paragraphs:

The Leiter International Performance Scale was developed on the basis of research with retarded children. Year levels are from 2-18, and scoring yields an MA and a ratio I.Q. Among retarded children, those with difficulties in the visual-motor sphere do poorly on the test. Because the Leiter Scale included some items requiring specific skills, such as the ability to tell time, Grace Arthur published an adaptation and restandardization of age levels 2 to 12 of the scale.

There are several versions of the Progressive Matrices developed by J. C. Raven. Series are composed of a number of matrices or designs, from each of which one part has been removed. The easier series require principally accuracy of discrimination. The easiest version, composed of colored designs (1958) is used with children at age levels 5 through 11 with retarded adults. Both a paper and pencil form and a board form (into which the subjects inserts the correct piece) are available. The test is heavily influenced by practice and education level. This test is especially suitable for adaptation to the needs of deaf children. It does not, however, yield qualitative information about the child's intellective processes.

A scale standardized on deaf and hard-of-hearing children is the Nebraska Test of Learning Aptitude. The scale includes 11 nonverbal subtests and is suitable for testing children from 4-10. Norms are available for both deaf and hearing children. Hiskey (1955) reports a correlation of .83 between scores on the Nebraska test and scores on the 1937 Stanford-Benet, administered to 380 hearing children.

In addition to non-verbal performance tests, which yield an I.Q. score, there is a recently published behavior rating scale designed for the mentally retarded called the Adaptive Behavior Scale (Heber, 1961; Nihira, Foster, Shellhaas, and Leland, 1969). It is designed to provide objective description and assessment of an individual's adaptive behavior. The term adaptive behavior refers to the effectiveness of the individual in coping with the natural and social demands of his environment.

It has long been recognized by many educators and administrators that there has been a need for the use of a combined or total communication system for deaf children. By total communication is meant the right of a deaf child to learn to use *all* forms of communication available to develop language competence. This includes the full spectrum; child-devised gestures, speech, formal signs, fingerspelling, speechreading, reading and writing. To every deaf child should also be provided the opportunity to learn to use any remnant of residual hearing he may have by employing the best possible electronic equipment for amplifying sound.

Research studies investigating the results of early manual communication support the total communication philosophy (Meadow, 1967; Montgomery, 1966; Stuckless and Birch, 1966; Quigley, 1969; Quigley and Frisina, 1961). These studies are summarized in Table I. The manual groups in these studies were not taught only through manual communication. They were taught through a total communication approach. They are referred to as manual groups because they were children of deaf parents meaning that communication with their parents was manual and consequently, their first learned communication system was also manual.

TABLE I.—SUMMARY OF STUDIES INVESTIGATING RESULTS OF EARLY MANUAL COMMUNICATION

Investigator	Sample	Results
Stuckless and Birch (1966).	One hundred and five deaf children of deaf parents (manual group) 337 matched deaf children of hearing parents (oral group).	1. No difference in speech. 2. Early mannual group better in speechreading. 3. Early manual group better in reading. 4. Early manual group better in writing. 5. Early manual group possibly better in psychosocial social adjustment.
Montgomery (1966)	Fifty-nine Scottish children	1. Exposure to, use of, and preference for manual communication did not negatively affect speech or speechreading skills.
Meadow (1967)	Fifty-six deaf children of deaf parents (manual group) 56 matched deaf children of hearing parents (oral group).	1. Manual group better in reading (2.1 years). 2. Manual group better in math (1.25 years). 3. Manual group better in overall education achievement (1.28 years). 4. Manual group better in social adjustment. 5. No difference in speech and lipreading. 6. Manual group better in written language.
Quigley and Frisina (1961).	Sixteen nonresidential deaf children of deaf parents (manual group) 16 nonresidential deaf children of hearing parents (oral group).	1. Manual group better in vocabulary, speechreading, and educational achievement.
Quigley (1969)	Sixteen orally educated deaf children matched with 16 combined orally and manually educated deaf children.	1. Combined manual oral children did better in language, speechreading, and general academic achievement.

The total communication approach is essential for the hearing impaired mentally retarded child. It is vital that these children have a vehicle for the input and output of information, experiences, feelings, and so forth. Excessive dependence upon oral communication is likely to lead to inordinate frustration, incomplete information, and inadequate socialization for these children.

A basic consideration in planning a program for the hearing impaired mentally retarded child is his rate of learning. There are many estimates given as to the rate at which a given retardate can learn. The same can be said for the deaf child. We must be careful when dealing with a child who has both these disabilities that we do not too quickly ascribe to him a specific level of potential.

The hearing impaired, mentally retarded child presents a need for a unique curriculum with the goals and expectancies for him formed realistically through recognition of both his abilities and deficiencies. If he is to become a contributing member of society, it must first be estimated how far he will be able to progress and then determined within that area the learning experiences that are essential to him.

Although the "normal" deaf child is similar in his ability to learn from direct experience, the hearing impaired mentally retarded child is less able to plan purposefully, reason, and generalize, or to use past experience in meeting new situations. He is less imaginative and less able to deal with abstractions so he stands to profit more from activities which are concrete and meaningful.

Total stress on academic accomplishments and preparation for higher education for the hearing impaired retarded child would be quite inappropriate. Major emphasis should be given to the development of the child's communication ability, social competence, personal adequacy, and occupational skills. At the same time, academic accomplishments should not be ignored. There is a definite need for the child to realize his academic potential since a basic educational level will be necessary for his successful job placement.

Curriculum should be developmental in nature—with specific skills and concepts introduced and taught when the child has achieved the maturity and experiences necessary for their acquisition, relatively independent of factors such as chronological or mental age.

For children who have both mild hearing impairment and mild retardation, neither the hearing loss nor the retardation should be major threats to educability. Hearing should be the primary source of language input for these children posessing considerable residual hearing. Habilitation should stress training in auditory and visual speech reception. Most of these children can benefit from a hearing aid if appropriate hearing aid orientation is provided (McCoy and Lloyd, 1967; Moore, Miltenberger and Barber, 1969). For children with mild retardation but severe hearing loss, a total communication approach, utilizing signs and fingerspelling, is frequently more appropriate. Although a hearing aid may be of some value the initial establishment of communication should use the *simultaneous* oral speech and manual presentation of all material.

In academic skills, these children should be taught to read with comprehension and understanding to their maximum ability. Arithmetic skills and basic quantitative concepts are of fundamental importance in preparing the child for social and economic adjustment.

Prevocational orientation is a most important area. Emphasis should be placed on (1) information and concept understanding, for helping the child to work as desirable and to be aware of the variety of jobs, (2) personal appearance, (3) personality development, (4) work habits, stressing such things as attendance, punctuality, understanding and following directions, and completing assigned tasks, and (5) coordination skills.

For children with moderate retardation and varying degrees of hearing loss, desirable goals are (1) personal adequacy, (2) social competence, including language sufficient to communicate with friends and future fellow workers, and (3) academic skills needed to insure vocational success. All of the previously discussed areas would be applicable to these children in varying degrees of difficulty, and as their abilities permit.

The hearing impaired, trainable, retarded child who demonstrates little readiness for academic subjects and who may never develop usable skills in the academic areas, should be trained in a manner quite different from the hearing impaired educable retarded child. The realities of the child's limited potential must be kept in mind when structuring a program for him. He must be taught to adjust to his institutional environment, and to a limited degree, contribute to his society. A large majority of trainable retarded hearing impaired pupils will function as dependent or marginally dependent adults, living in their own homes, foster homes, or in institutions. As adults, they will need considerable supervision and attention if they have failed to develop the skills which will help them gain a degree of mastery over their environments; the home or institutional environment where skills of daily living are needed; the community where dangers must be avoided and services must be made understandable in regard to stores, recreation areas, eating facilities, etc., and the sheltered work environment.

The upper limits of educational, social and vocational competency of the hearing impaired trainable retarded child approximates or overlaps the lower limits of the hearing impaired educable retarded child. However, the following might serve as objectives for hearing impaired trainable retarded children.

(1) To foster a healthy self-concept in the child, providing help in the specific areas of self-care, social adjustment and functional communication.

(2) To help him develop skills that will give him as much command as feasible over his environment.

In general, it can be said that educationally, the hearing impaired, trainable, retarded child can be expected to learn little if any academic work. However, most can learn to read signs for their protection and can learn to count and use small numbers in a limited functional manner. They will need a supervised environment both socially and in the management of their affairs. Vocationally, they do not usually obtain a job in the community, although they may be able to work in a sheltered workshop. All vocational activities will require maximum supervision. Attention should be given to motor development, social adjustment, physical health, self-care, and stimulation of imagination and creative expression. In this respect, his training should be similar to that of his hearing peers. However, it must be stressed that communication is the basic prerequisite to progress in other areas.

Although, a total communication approach is used, initial instruction of the trainable hearing impaired child will depend heavily on the use of the language of signs. This means that not only the child, but those in his immediate environment should gain competence in this language system to allow for the 24-hour communication programming of each child. Sign language, will be of little value to the child unless others, like his aides, attendants, nurses, psychologists, therapists (e.g. music, occupational, physical and recreational), and social workers, also learn at least the rudiments of signing. The functional value of the sign language in an environment will increase the general communication ability.

A basic receptive and expressive vocabulary, that is functional in the child's environment, is essential. Pictures of food, clothing, furniture and other objects within the child's immediate environment (with a simultaneous oral and manual presentation) can be used primarily for limited vocabulary building, whether this vocabulary be taught for primarily manual or oral reproduction. For these children, mastery of a social usage vocabulary is much more functional than is a reading skill of grade two level.

Although initial communication may depend primarily upon manual communication, if the child possesses substantial residual hearing, speech production may be considered a reasonable goal. Therefore, the appropriateness of a hearing aid must be considered along with training in auditory and visual speech reception and speech production. Berger (1971) provides a systematic approach to multi-modal language responses including gross gestures, signs, fingerspelling, writing and speaking. The effectiveness of such programming can be increased by 24-hour communication programming using the stimulus and response mode appropriate for each child making communication functional and thereby facilitating language development.

The audiologist, educator of the deaf and speech pathologist must provide indirect services on behalf of the child as well as direct clinical and/or instructional services. The importance of "indirect" services in comprehensive programming for the hearing impaired retardate have been previously presented (Brelje and Wolff, 1969; James, 1967; Lloyd, 1970; 1971; Lloyd and Burrows, 1967; McCoy and Lloyd, 1967; Moore, Miltenberger and Barber, 1967). In addition to involving others in 24-hour programming to use the appropriate language stimulus and response modes, and functional vocabulary for each child, indirect services involve assisting others in an understanding of each child's particular hearing impairment, associated behavior, the limitations of hearing aids, signal to noise ratios, nonverbal visual cues, the experimental analysis of behavior,

behavior modification, general environment and situational management, etc.

It is essential that the hearing impaired mentally retarded child begins communication programming at the earliest age possible. This is important not only to help him establish a language system but also to aid his social competence development. Mitchell and Smeriglio (1970) conducted a study involving non-hearing impaired moderately and severely retarded children. Their results have even more implications for mentally retarded children with the additional handicap of hearing impairment. Two groups of twenty-five moderately and severely retarded children were evaluated for social-competence development during their first years of institutionalization. Children receiving the routine care characteristic of many institutions made no progress in Vineland social age; consequently, they showed a significant decline of 10 points in average social quotient (SQ). Children receiving an additional high-saturation teaching program increased in social age and maintained their preadmission SQ's. The high-saturation teaching program consisted of: Individualized instruction, primarily in flexible groups of one to six children, in the areas of constructive play, prekindergarten readiness, eating, and other self-care skills—all activities being adapted to the child's level of development. Environmental enrichment via field trips, story telling, and so forth was stressed, and affectionate interaction between the child and therapist was encouraged. The relatively low ratio of children to therapists gave the program some of the impact of a nursery school classroom. Both groups were significantly different from normal children in the comparative rate of development in various areas of social competence. Results suggest that young moderately and severely retarded children require formal teaching in addition to routine attendant care in order to maintain and increase social development.

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CURRENT TRENDS IN SERVICES FOR THE DEAF RETARDED IN SCHOOLS FOR THE DEAF AND RESIDENTIAL FACILITIES FOR THE MENTALLY RETARDED

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This paper reports the results of a national survey conducted the first part of 1971 in which the attempt was to determine the extent and general focus of programs available for deaf retarded persons. The scope of the survey extended through state public residential schools for the deaf and public institutions for mentally retarded. No attempt was made to assess either private facilities for deaf or M.R. or community centered programs such as public education classes or rehabilitation centers.

The questionnaire consisted of 11 questions aimed at assessing fundamental aspects of formal deaf M.R. programs.

Table I.—Questionnaire

1. Do you have a special program for Deaf M.R.? Yes ________ No ________
   If *No* check and return card.
2. Number of Deaf Mentally Retarded? ________________
3. Criterion used to classify as Deaf? Audiologic report showing loss in speech frequencies between 60–75 dB ________ 75–90 dB ________ 90+ ________
   Report in file ________ Other (specify) ________________
4. Criterion used to classify as mentally retarted? 80 IQ ______ 70 IQ ______
   60 IQ ________ 50 IQ ________ 35 IQ ________ Other (specify) ________
   ____
5. Is your program run by a teacher of the Deaf? ________ M.R.? ________
   Teacher of Deaf and M.R.? ________ Other (specify) ________________
6. How many students are included in the program? ______ How many hours per day? ________ Number of teachers? ________________
7. Is your approach Manual? ________ Oral? ________ Simultaneous? ______
8. How long has your program been in operation? ________________
9. Are all your deaf M.R. housed separately? ________________
10. Are there community services for Deaf M.R.? ________________
11. Number of students who were previously at an Institution for the deaf? ________________
11. Number of students who were previously at a School for the Deaf? ________

The initial part of the report covers the reports submitted from public residential schools for the deaf. A total of 62 questionnaires were sent and 57 were completed for a 92 percent return rate. Eight facilities for the deaf reported active programs for Mentally Retarded with 49 schools reporting no such program offering. The total number of students reported in the eight programs was 208 with all students identified as D.M.R. as being included in programs, somewhat contrary to the identified population and program offering which will later be observed in facilities for Mentally Retarded. A question which naturally arises from the present data is the extent to which mentally retarded are appropriately identified in schools for the deaf.

The criterion used for deafness varied from school to school. With the most used criterion being as follows: 60db loss or greater according to audiologic report in file, some loss with unspecified db level and unable to understand connected speech. The criteria most used for defining mentally retarded was an IQ of 80 and below, however, the lowest IQ reported was 50 with qualifying criteria of ability to function in classroom setting.

Table II.—Program Characteristics For D.M.R. in Schools for the Deaf

Program administered by:	
Teacher of deaf	6
Teacher of deaf and M.R.	2
Number and type of personnel:	
Teachers	46
Aides	3
Criterion for Deaf	60 db loss minimum. No set of db level—unable to understand connected speech.
Criterion for M.R.	80 IQ to low of 50.
Comments	Can function in classroom.
Hours per day	Range of 2–7½.
Method:	
Oral	1
Simultaneous	7
D.M.R.'s housed separately:	
Yes	4
No	4
Community services affiliate:	
Yes	2
No	6
Length of operation:	
2 months	3
2 years	2
4 years	1
6 years	2
D.M.R.'s transferred from M.R. facility	13 (6.2 percent).

Table II presents general characteristics of the eight active programs reported in the survey. Of particular note is the preponderance in the use of simultaneous method with the D.M.R. and also of interest is the reported segregation of D.M.R.'s in four of the reporting facilities. Two reported an affiliation with community services and the programs have been in operation from a low of two months to as high as six years. One of the interests of the survey was to determine the extent of reciprocal transfers between institutions for the Mentally Retarded and Schools for the Deaf. It was reported that only slightly in excess of 6 percent of the D.M.R.'s programmed had come in from Institutions for the Retarded.

The second part of the report covers the results of the survey from institutions for the mentally retarded which is presented in Table III.

Table III.—Program Characteristics For D.M.R. in M.R. Facilities

Program administered by:	
T.O.M.R	4.
T.O.D	9.
T.O.D. and M.R	6.
T.O.M.R. and speech and hearing	2.
Speech and hearing personnel	15.
Deaf person	1.
Non-professional	2.
T.O.D./M.R./speech and hearing	2.
Number and type of personnel:	
Teachers	71.
Aides	50.
Criterion for deaf:	
40–60 db loss	1.
60–75 db	12.
75–90 db	16.
90+	5.
Not determined	2.
Staffing evaluation reports	4.
Recommended by audiologist	1.
Criterion for M.R.:	
85 I.Q	1.
80 I.Q	10.
70 I.Q	16.
60 I.Q	4.
Functional level	6.
AAMD classification	1.
Psychologist report	1.
Unanswered	2.
Hours per day	Range from 30 minutes to 24 hour program.
Method:	
Oral	3.
Manual	1.
Simultaneous	35.
Unanswered	2.
D.M.R.'s housed separately:	
Yes	4.
No	37.
Community services affiliated:	
Yes	5.
No	36.
Length of operation	Range from 7 months to 18 years.
D.M.R. transferred from Deaf facility	109 (5.02 percent).

One hundred sixty-nine questionnaires were sent and 137 were completed for 81 percent return rate. Ninety-six facilities reported no formal efforts focused on the Deaf M.R. and 41 facilities reported some type of structured program offering for D.M.R., roughly 30 percent of those reporting as compared with 14 percent of the reporting deaf schools.

Institutions for the retarded reported a total number of 1,904 deaf retarded with 675 or 35 percent of those identified in an active program. A wide range of professional backgrounds was reported as working with the deaf retarded as evidenced in Table III. The criterion for designating deafness varied from no determination to 90db loss and above with the majority using a criteria in the range of from 60 to 90db loss. The criterion for M.R. varied from 85 IQ downward with the majority reporting in the 80 IQ and below categories.

The method used represented a slightly broadened version of those reported for the deaf schools with the simultaneous or total communication procedure accounting for 85 percent of the programs. D.M.R.'s were housed separately in only 9 percent of the facilities for the retarded and only 11 percent reported an affiliation with community services. The length of operation ranged from 3 months to 18 years at one facility. It was reported that slightly over five percent had been transferred from schools for the deaf, however, with some 109 D.M.R. transfers reported, a representation of 18 times as many as had been reported transferring to schools for the deaf.

By way of summary it appears that nearly nine times as many D.M.R.'s are residing at facilities for the mentally retarded than at Schools for the Deaf, whereas, however, Schools for the Deaf reported 100 percent of their D.M.R.'s in programs and only 35 percent of active involvement was reported for the D.M.R. population in institutions for M.R. Regarding trends, the survey indicated that if you are D.M.R. your chances are 10 to 1 you will end up in an institution for retarded. The probability of your being transferred from a school for the deaf to a facility for retarded is nearly nine times that of your being transferred the other way. If you stay in a school for the deaf, however, you in all likelihood are going to be included in some form of a program, whereas if you are in an institution for M.R. your chances are only about 1 in 3.

Certainly much further research is needed to clarify certain aspects such as relationships between program and ability level, age, criterion, method used, and professional training of the programmers.

Overall program trends are somewhat elusive in so far as little or no program evaluation data or standardization of effort has been forth coming, hopefully, a desired outcome of the present conference.

SYSTEMATIC DEVELOPMENT OF COMMUNICATION MODES: ESTABLISHMENT OF A MULTIPLE-RESPONSE REPERTOIRE FOR NON-COMMUNICATING DEAF CHILDREN

Shirley L. Berger, M.A., Parsons State Hospital and Training Center, Parsons, Kans.

Vernon's (*1*) comprehensive treatise on the medical, education and psychological aspects of multiply-handicapped deaf children makes us gravely aware of the magnitude of the educational challenge presented by these children. Meadow and Schlesinger (*2*) report a prevalence of unmanageable behavioral disorders among deaf school children which in all likelihood will increase in frequency in proportion to the enlarging population of children whose deafness is accompanied by physical and mental handicaps. Lacking special faculties and facilities for asocial, disruptive and underachieving students, academically structured schools for the deaf are unable to cope with the disturbed or behaviorally deviant child. (*2*, *5*) Too often, the very maladaptive behaviors which preclude a child from schools for the deaf bar his admission to established training programs in residential centers for the mentally retarded. Recent surveys (*3*, *4*) indicate that training facilities for such children in schools for the deaf are limited, and that existing programs in mental retardation centers are highly diverse in objectives, extent, and quality of services.

The literature (*6*, *7*, *8*) reflects professional awareness of the numerous unmet education, social and vocational needs of many deaf individuals. Conferences such as the June, 1971 symposium on the deaf-retarded sponsored by the Pennsylvania Office of Mental Retardation, regional meetings on the deaf-blind child, and special committee organizations such as the recently formed AAMD-CEASD Joint Committee on the Deaf-Retarded testify to the growing interest among professional educators in promoting and devising improved services.

The need for expanded services is highly visible. The target for greatest professional investment now should be to devise effective programs. We need to develop strategies for effecting behavior changes. We need programming which delineates functional goals, specifies procedures and designs appropriate instructional materials.

This paper, with an accompanying cinescope, describes a strategy for effecting the acquisition of a multi-modal response repertoire with non-communicating deaf children. The program itself is viable, with procedures continually being modified and expanded. The behavioral approach, with its sequencing of goals, specified procedures, and management of contingent events to bring about increased appropriate responding, may serve in other settings and in the attainment of different goals.

Acquisition of a language system was the major goal determined for a group of nine deaf children in residence at Parsons. Five of the group recognized the communication process but possessed minimal communication tools and no connected language. Four of the group were essentially non-communicative, lacking responsiveness even to gross natural gestures; extremely socially isolated, these four reacted to intrusion or interference with further withdrawal or abusive and destructive behavior.

Two components of the language system were identified for programming: (1) the mediating tools or communication modes, and (2) the grammatical network of syntactic and morphologic rules which dictate functional application of vocabulary as it is acquired. Interdependent, these two components are developed concomitantly. However, only the programming for development of multiple communication modes will be discussed in this paper.

Language modes chosen for response development were sequenced according to an empirically determined scale of increasing complexity: gross motor responding (sitting, coming, standing), specific motor responding (pointing, selecting, matching), manual signing, fingerspelling, writing, speaking.

Pre-requisite to response development of any communication mode is an ability to discriminate the salient features of that mode. Therefore, the following sequence of discriminative stimuli was arranged, again according to increasing complexity: gestures (gross and specific), manual signing, alphabet symbols (printed and signed), graphemes, fingerspeling, visual-kinesthetic -auditory features of spoken language.

Procedurally, a continuing interchange between discriminative responding and response development takes place, with stimulus discrimination always preceding modal response development.[1] Utilizing a paired-association procedure, new stimuli are matched with previously learned ones; the first-learned stimuli are faded so that independent discriminative responding to the new stimulus can be elicited. Through imitation and successive approximation, the new response modes are developed. Handshaping in the development of the primary response modes usually is needed, as many of these children initially are not imitative. As additional modes are introduced for stimulus discrimination, many children condense the procedure and spontaneously imitate new content material on first presentation.

All manual language directed to the children is accompanied by verbalization. All the children's signed responses are voiced by the teacher as received. Amplification is provided during classroom time: individual aids have been fitted for those children whose residual hearing indicates possible benefit.

Behavior controls in the disturbed, non-discriminating, non-attending child can be established and maintained through response contingency reinforcement. Since social and material elements of these children's environment appear non-meaningful, food usually is the most effective choice of reinforcer. Such primary reinforcers, which motivate the child as well as inform him of the correctness of his responses, are always presented with a social reinforcer which eventually for him, and more immediately for higher-functioning children, may become the only type reinforcer needed.

SUMMARY AND CONCLUSIONS

Considering the limited language instruction time each child receives (daily average: 1½ hours; maximum: 2½ hours), the elementary manual communication skill of his instructors and the almost total lack of communication exchanges available to the child outside the classroom, progress through this program appears considerable for every child. (*9*) Of the four children who were totally noncommunicative at program on-set, one has a few single-word oral responses and is progressing into the beginning speech-reading phase; two are signing and fingerspelling a limited vocabulary in phrase and short sentence form; the fourth is receiving a few fingerspelled words and responding in that mode with those words. The higher-functioning children, with varying degrees of proficiency, are constructing sentences combining signing and fingerspelling. Oral production for two children is beginning to emerge.

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[1] See Appendix A.

It is notable that the children respond readily in whichever mode they are directed to use, once a basic skill has been attained. Undirected, they tend to employ the newest (and most complex) skill they have acquired.

Spelling appears to be greatly aided by fingerspelling; several children have demonstrated that they can correct mispelled words following manual spelling.

Looking behavior, often requiring considerable training in a program focusing early on oral production and reception, is naturally acquired in this program. The non-attending child begins to look for expected reinforcement following a correct response or looks to the instructor for another stimulus presentation. Soon he looks to the instructor's face for the social approval given simultaneously with the primary reinforcer.

The transition from one language mode to the next has been effected smoothly by each child, suggesting that the sequencing of stimulus tasks is appropriate. This orderly progression through the communication mode sequence, alternating between discrimination activities and new response development, appears to allow discovery that environmental events can be communicated in multiple modes.

Perhaps the most valuable feature of this systems arrangement is the establishment of the initial behavioral goals through which a non-communicating, non-discriminating child can be helped to attend to relevant stimulus features and to indicate his discriminations in simple gestural form. Of a certainty, this program has demonstated that the behaviorally deviant deaf child can be helped to acquire awareness of the communication process and to develop language tools for interacting with his environment.

APPENDIX A.—SYSTEMATIC DEVELOPMENT OF COMMUNICATION MODES

Communication Modes for Response Development

1. Gross gestural communication: pointing, matching.
2. Manual communication: signing.
3. Manual communication: fingerspelling.
4. Manual communication: writing.
5. Verbal communication: speaking.

Sequential Phases of Response Development

INTRODUCTION OF REINFORCEMENT CONTINGENCIES TO ESTABLISH BEHAVIOR CONTROL

1. Non-verbal responding (completing appropriate action) to non-verbal gestural stimuli.

DEVELOPMENT OF RESPONSES UNDER STIMULUS CONTROL OF ENVIRONMENTAL PROPERTIES AND EVENTS

2. Discriminative responding (matching, pointing, selecting) to color attribute. Discriminative responring (matching, pointing, selecting) to manual signs for color, body parts, clothing items, food, toys, etc.
3. Manual signing for above items.
4. Discrimination of number symbols, number manual signs, number values.
   Manual signing of numbers.
5. Discrimination of alphabet letters and fingerspelled alphabet.
   Fingerspelling of alphabet.
   Fingerspelling with grapheme-object stimulus.

6. Discrimination of grapheme by object selection, by signing.
7. Discrimination of fingerspelled words by object selection, by signing.
   Fingerspelling in response to signed stimulus or object presentation.
8. Writing Responses:
   Readiness activities (chalkboard and paper scribbling, coloring, tracing, copying lines and shapes, tracing letters) should be introduced as early as child's behavior permits.
   Copying graphic symbols.
   Drawing graphic symbols as stimulus is faded.
   Printing single symbols with a fingerspelled stimulus.
   Printing graphemes as grapheme stimulus is faded.
   Printing grapheme with a fingerspelled stimulus.
   Printing grapheme with a signed, object, or picture stimulus.
9. Phoneme production in imitation of model, discriminating visual, kinesthetic and auditory features.
   Phoneme production in response to written or manual stimuli.
   Single and connected word production with manual or written stimuli.
10. Discriminative responding to lip movements combined with auditory and manual stimuli.
    Responding to visual (lip movements) and auditory stimuli.
11. Discrimination of auditory stimuli.

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Vocational Education (10:30 a.m.–4 p.m.) ASB Auditorium

Chairman: Hollis W. Wyks, Assistant Superintendent, Marie H. Katzenbach School for the Deaf.

10:30 a.m. "*What Opportunities are Needed by Deaf Students.*" Edmond D. Cassetti, Director of Eduction and Rehabilitation Services, American School for the Deaf, Hartford, Connecticut.

10:30 a.m. "*Counseling Deaf Students so that They May Take Advantage of Opportunities or Make Better Use of Opportunities Available to them Now.*" Stanley R. Traxler, Counselor, Program for the Deaf, Seattle Community College, Seattle, Washington.

1:30 p.m. *"The Vocational Student in a School for the Deaf: His Opportunities."* Dennis Q. Drake, Vocational-Technical Principal, Iowa School for the Deaf, Council Bluffs, Iowa.

"Opportunities for the Low Under-Achieving Deaf: The Regional School." Roy G. Parks, Superintendent, Arkansas School for the Deaf, Little Rock, Arkansas.

"The St. Paul Technical Vocational Institute's Technical Vocational Program for Deaf Students" Robert Lauritsen, Director, Program for the Deaf, St. Paul Technical-Vocational Institute, St. Paul, Minnesota.

"Opportunities Through True Vocational Education." John Degler, Vocational Principal, Pennsylvania School for the Deaf, Mt. Airy, Pennsylvania.

WHAT OPPORTUNITIES ARE NEEDED BY DEAF STUDENTS

Edmond D. Cassetti, B. A., Director, Vocational Education and Rehabilitation Services, American School for the Deaf

Although this paper is concerned primarily with youth who are still in school, it is the purpose of the writer to consider that period of time in the youth's future after he has explored the world of work to some extent and begins to take stock of himself, his job, his social status, his satisfaction, or dissatisfaction as the case may be, and his future goals or ambitions.

School leavers who appear to have reached their maximum potential while in school, often become late bloomers and progress to a point where they can and do attain higher levels of achievement. Latent ability has a way of emerging when least expected in all of us. This is especially true of those deaf who have not achieved academically well while still in school. At some time or other, the desire for change becomes strong. The deaf person may wish to obtain a promotion to a better job, or he may want to transfer to some other type of work which he may feel is more in his field of interest, but he lacks the knowledge required for advancement or transfer.

The rapid technological advances which have taken place in the past decade has opened up whole new industries and in order to meet the demand for skilled technicians, new training programs will have to be developed. In many cases, company-sponsored training will need to be provided as schools and technical colleges will not be able to provide such a variety of equipment or programs for areas such as the following—to name a few: Computer technology to—handle the review, validation, and payment of medical claims; maintain computerized records on all aspects of criminal justice from the crime to the ultimate release from prison of a convicted criminal; and in environmental control—generating systems will be developed to produce low cost electricity while eliminating poisonous emissions; radio isotopic devices will monitor bacterial contamination in fuel systems, rivers, waste disposal plants and water purification facilities.

There are many solutions to this problem which may provide an opportunity for the capable deaf individual to advance within the company. Some firms provide tuition-refund plans in which the company pays the employee's tuition at an approved school. Some operate work-study plans which combine part-time employment with part-time school attendance. It covers a field in which classroom instruction can be coordinated with training in the employer's plant or office and gives the participants an opportunity to gain actual job experience while they acquire educational skills applicable on the job. Work-study plans can play an important role in the occupational training of the deaf student while he is still in school as well as out of school youth or adults through vocational rehabilitation planning. This can serve as a pre-employment trial period for both the employer and the student. It will also help the student to determine whether he has made the right occupational choice. It can also stimulate the student's interest in learning through real life applications of their classroom studies. Other plans involve company-sponsored off hours courses which may be in special training and general courses to increase the employees' general knowledge and job skills, or to help them towards promotion. Still other programs provide training which are a part of a comprehensive training program leading to promotion. These may involve such courses as blueprint reading, accounting, electronics, or basic physics. Through efforts of the National Association of the Deaf, federal civil service careers have become available to our deaf population. At present, there is a drive by the federal postal service to recruit deaf applicants for their letter machine sorters.

Basically, the deaf individual needs a broader basic education in occupational areas in order to make sensible vocational choices within his abilities. We also need to develop opportunities for self-learning beyond graduation.

Our schools today should strive to make our deaf graduate self-dependent. In view of the fact that occupational changes for the better come long after graduation from his school, any study he undertakes would generally be individualized instruction. The deaf graduate should be well prepared to participate in independent study. Much audiovisual material have been produced by federal agencies and are available to the public through the National Audio-visual Center, or Media Services and Captioned Films.

Audio-visual material can be used to present information on virtually any subject and are wonderful sources of information for individual study.

Other sources of individual study include programed instruction. The material to be learned is presented in a logical series of small, easily understood steps. Usually, it involves the use of a textbook or teaching machine designed to give the student one problem at a time. Each of these steps require an immediate response, and as long as the student using the material responds correctly to each question or problem, he continues on to the next step which provides more advanced information.

The two principal techniques of programed instruction are:

(1) the linear method in which subject matter is broken down into simple statements requiring a word or two for completion. These statements logically lead the learner to reply correctly. The same idea is repeated several times but worded differently to facilitate correct responses. Each frame is based on the preceding one and provides background for following frames. Because the linear method presents information in very simplified form and also gives hints for correct responses, learners seldom make errors.

(2) the branching method which presents more information in the form of multiple choice questions. It is anticipated that the student using this method would occasionally pick the wrong response in which case he is led to another set of frames which show him where and why he has erred and his responses must be correct before he can return to the main track of the program.

For teaching basic facts or simple work skills, the linear method is used, while the branching method is generally used with subject matter which requires more complex or abstract thinking.

Students who are well versed in using these and various other media on an independent study basis should be able to continue further education at a time when he begins to concern himself in the light of his accomplishments, and schools for the deaf which have working arrangements with industry for specialized programs will have met the needs of the deaf to a great extent.

COUNSELING DEAF STUDENTS SO THAT THEY MAY TAKE ADVANTAGE OF OPPORTUNITIES OR MAKE BETTER USE OF OPPORTUNITIES AVAILABLE TO THEM NOW

S. R. Traxler, M.S., Assistant Director, Program for the Deaf,
Seattle Community College

The counseling of deaf students so that they may take advantage of and make better use of opportunities available to them represents a multidimensional evaluation of the dynamics of human development. If we assume, as psychologists have stated in the past, that deafness imposes a degree of isolation upon the individual and that we as educators and counselors have some recognition of the effect of isolation on the parameters of normal maturation, then we must assume the responsibility for the development of environmental stimulation which will most significantly compensate for the isolation effect. The scope of this paper will focus on two specific problem areas in which deaf students enrolled at Seattle Community College have the most trouble coping with and to provide some general guidelines for a systematic and continuing counseling program.

The philosophy that primary responsibility for career education of young deaf students is the responsibility of Vocational Rehabilitation officers or the staff of post-secondary programs is the most readily observed injustice inflicted upon the deaf student. The majority of students whom we accept have only minimal knowledge upon which to make even the most tentative decision. In discussions with students who have transferred to our program from other programs, the general criticism is not the quality of other programs, but a complete lack of knowledge of their reason for going initially. In general, it appears that little or no guidance has been made available to them prior to applying to the college of their choice. It seems, rather, that decisions are made for students without consideration of the interest or need of the individual.

The foregoing comments represent, however, only superficial evidence of why many deaf students don't develop to their fullest potential in post-secondary programs. Considering only the process of career selection, the dynamics related to this process start to develop early in the child's life. The concept of a real world of work must be incorporated into the students' environment at an early age. The early identification with a father image who goes to work—the discussion before and after pay day—the rewards—the degrading employer—the promotion—the lay-off, all enhance awareness of a real work environment and must be learned from environmental exposure. If this process can be enacted to the point that the young deaf student can relate to his environmental world of work in a natural way, then the procedure of providing information and experience on which the student will make a vocational choice becomes relatively simple.

The task of providing adequate experimental stations and laboratory experiences so that deaf students move from a general approach of the world of work to a more specific identity with it is the terminating goal for most secondary deaf students. At this stage of the developmental process, the student should be aware of his own aptitudes and achievement levels. He should be able to accentuate his own proficiencies and use his deficiencies to govern his experimentation in the various career work experiences to which he is exposed. The role of the counselor is reduced to providing the input which will help the student close the remaining gaps in his own conceptualization. For example, the student should receive information regarding the various post-secondary programs available and which program offers the vocational and/or academic training most consistently aligned to his interest and needs.

Until the environmental setting in which the deaf student develops can initiate need-oriented and continued counseling, the post-secondary programs will not be able to operate most effectively. The fundamental techniques of evaluating work, individual competencies, interest, and general awareness of self in a framework of life-style should be developed long before the student makes a college and career choice.

The second major area of concern is the lack of awareness of societal structure and the role the individual takes in this structure. Deaf students seem to have a variety of frustrating encounters with themselves in trying to determine their own place in society and what is the most meaningful direction to pursue. Specific student problems most often presented to our program include:

1. Trouble in breaking dependency on the "provider";
2. Lack of awareness of self and self-identity;
3. Inability to establish deep involvement with others, including peers;
4. Lack of sensitivity to the needs and feelings of others; and,
5. General lack of knowledge of behavioral patterns needed for a minimal level of functioning in an unprotected society.

This area, more than lack of vocational guidance, language, or general low academic deaf students ability to obtain his personal goals. At the post-secondary level we see students becoming involved in the relevant issues of the times, but the involvement is of a superficial nature. A large percentage engage in sexual relationships which are physically rewarding but lack the emotional effect needed for continued meaningfulness. The resulting problems of the emotional isolation imposed on deaf students is a problem which the environment must deal with starting at an early age and continuing throughout the students' developmental years.

To implement a meaningful counseling program requires the commitment of all members of the school staff. It requires that lines of communication be established and activated between all levels of school personnel. And most important, it means that personnel must be flexible to meet the needs of individual students.

Although it is not the purpose of this paper to recommend specific counseling techniques, one basic philosophy seems most appropriate in meeting the developmental needs of deaf students. This philosophy simply stated is "Involvement." Involvement with the young deaf student will provide the basic building block for a counseling relationship. The relationship, with a skilled school counselor, will offer the direction for manipulation of a sterile environment to one that promotes human development.

In summary, it should be stated that the two major areas of concern discussed in this paper represent feedback from deaf students enrolled at Seattle Community College. A large percentage of the students struggle with these problems to varying degrees. If we are to provide effective post-secondary programs, the development of comprehensive counseling services are imperative.

THE VOCATIONAL STUDENT IN A SCHOOL FOR THE DEAF: HIS OPPORTUNITIES

O. Dennis Drake, Vocational-Technical Principle,
Iowa School for the Deaf

We know that the vocational deaf student of today has unlimited opportunity, greater than any of his predecessors. With the advancement of technology, the awareness of education and the funds made available by our government, vocational education has made tremendous strides in the past years, so rather than dwell on the opportunities of today's student, I will talk about how we can make these opportunities available to our students through teaching, counseling, and information.

I believe that there are three classification of students: (a) the academic student who is sometimes skilled in the vocational arts, but oftentimes he is not. He may make an excellent academic student but sometimes falls short in the vocational aspect of his education. This of course is not always true but seems to hold fairly constant; (b) the average deaf student academically will usually make the best vocational student. He seems to be more manual in his make-up, hence does better in the vocational area. He also possesses motivation, the will to do a job well, and the second sense about anything mechanical; (c) the below average student does not do well academically and in many cases, his vocational ability is also low. Here again this is not always the rule of thumb because many of these less talented students also possess that mechanical sense of the average student and do a fine job vocationally. This is more often the case than not, I find.

When a student enters the vocational school he may ask himself—who am I, why am I here, what am I supposed to do, and why should I do it? It is the vocational teachers responsibility to guide the student and help him find his place in the world of work.

This may be done by finding out what the student's interests are. He will probably have one or two minor interests. The teacher must find out what his major interest or interests are and capitalize on this for a starting point in his vocational education. The student may change, so the teacher must remain flexible in his guidance. Once the major core interest has been identified the student's needs must be met by utilizing related educational areas such as academic, support services, and the guidance of the teacher and counselor. After these support services have been set in motion and the student has direction, then a cluster of educational, skill, and work areas must be started to give the student direction. A stair step effect of job assignments whereby the student can work at his own level and speed. The first assignment would be fundamental, the second more difficult and so on. As the student finishes each step, he advances to another set of jobs and skills that advances him in his chosen line of work and vocational education.

The one aspect of his training that the teacher must provide is to see that no student fails. The student must experience success. He may not finish all the jobs on the steps to the top, but he will complete one or two and not fail entirely. If the student plateaus on the second step, then the teacher must utilize a work-study program fitted to each student whereby his abilities are met and the student can work to his highest capabilities. When his weakness is discovered and his strength in an area established, then an individual program may be devised to meet the needs of the individual student.

When setting up a vocational program for students, the teacher must give the student as much information on the subject as possible. That information is enforced by counseling from the teacher and guidance personnel. The second step is exploring many areas to give the student a broad base of experience so that he may make an intelligent choice in his vocational education.

The teacher must motivate the student whenever possible and develop understanding and confidence in the student. Skills and training seem to take their rightful role if this type of rapport between the student and teacher takes place. The student should be given tasks that challenge his ability and lead to self instruction. Above all the student must experience success, and the feeling of accomplishment.

When the teacher can provide this type of challenge for the student to work at the highest peak of his individual ability, then the opportunity of today's modern deaf vocational education will meet the needs of the student and provide almost any opportunity he can qualify for. It is not what can the deaf student do, but rather what can't he do? This question must be answered before he graduates and enters the world of work or goes on to higher education.

OPPORTUNITIES FOR THE LOW, UNDER-ACHIEVING DEAF: THE REGIONAL SCHOOL

Roy G. Parks, Superintendent, Arkansas School for the Deaf

"Low (Under) achieving post-school deaf persons have, in varying degrees, one or more of the following characteristics, which seriously curtail or prevent their participation in on-going vocational training and other adjustment type rehabilitation programs: (a) inadequate communication skills, specifically an inability to send and receive messages easily, coupled with severe language limitations; (b) underdeveloped work related and social skills and attitudes; (c) insufficient work skills; (d) inappropriate behavior patterns; (e) and organic and functional deficits in addition to deafness.

"Deaf persons of age fourteen or above, having the characteristics outlined above, would be considered as falling within the definition of being a member of the low (under) achieving deaf post-school population." (*From a Report of a Steering Committee on Activities for Low (Under) Achieving Deaf Post-School population.*)

There appears to be confusion and misunderstanding as to the composition of the class of the low (under) achieving deaf. A review of the admissions policies of Gallaudet and the National Technical Institute would quickly eliminate this group—20 percent of the school leavers. Also, the admissions requirements and course offerings of Delgado College, New Orleans, Seattle Community College, St. Paul, area Technical Vocational Institute reveals that the low (under) achieving deaf persons are not candidates for these programs.

The Regional School for low achieving deaf persons envisions more comprehensive services than are required for those capable of enrolling in existing vocational-technical programs. H.R. 5610 states, "The Secretary shall give preference to those with promise of offering the most substantial skills and experience in effective operation of a Center providing *a broad program of services*, research, training and related activities in the field of rehabilitation of these severely handicapped deaf youths and adults."

Since low (under) achieving deaf persons are likely to have serious language limitations, emotional and social problems, limited formal education, negative employment histories, they must have a broad and intensive special training in the company of similar persons and under the guidance and direction of workers who are experienced and qualified to serve deaf adults. It is the feeling of a Task Force Committee that such training must be provided in the semi-sheltered setting of a free standing residential training center as the first step on the ladder in their climb to independent living.

The specialized center services suggested by the Steering Committee should include the following:

1. Pre-entry Field Services.
2. Initial Evaluation and Diagnosis.
3. Medical Services.

4. Personal Adjustment Training, General Education, and Work Adjustment Training.
5. Counseling and Guidance Services.
6. Vocational Training.
7. Placement and Follow Through.
8. Expansion of Services and Outreach.
9. Professional Training.
10. Research.
11. Public Information.

Specifications for the center to serve the low (under) achieving deaf are as follows:

A. The comprehensive regional rehabilitation center shall be funded by the Congress of the United States through the Social and Rehabilitation Service, Department of Health, Education, and Welfare, which shall select a sponsoring agency from among applications submitted by any public agency selected and shall be the one which (1) gives promise of maximum effectiveness in the organization and operation of the initial comprehensive regional rehabilitation center for low (under) achieving deaf, and (2) gives promise of offering the most substantial skill, experience, and capability in providing a broad program of *service*, *research*, *training*, and related activities in the field of rehabilitation of low (under) achieving deaf persons.

B. To assure proper professional, technical, and other advice in the development of this Center for low (under) achieving deaf persons, there shall be authorized a Governing Board of experts, voluntary leaders, State officials and the public. All members shall be appointed through the office of the Regional Social and Rehabilitation Service in collaboration with the SRS. At least one-third (1/3 of the Board shall be drawn from the deaf population.

C. Administratively, the facility shall be operated under the direction of the governing board, which will be responsible to the funding Federal agency, ARS.

D. The Center will be in or near a metropolitan area of approximately 500,000 population.

E. The Center will be in an area which will facilitate recruitment of appropriate professional staff.

F. Clients for the Center shall include those persons who are fourteen (14) years of age or older who meet the criteria for low (under) achieving deaf persons.

G. Provisions shall be made for residential accommodations for married as well as single clients.

H. Affiliation with appropriate universities and medical schools shall be effected.

I. Employment and preparation of qualified deaf professionals shall be basic to the philosophy and practices of the Center at all levels, including the administrative level.

J. Tuition, transportation, training materials, and other costs of client services and support shall be arranged in such a way as to assure that all eligible persons will be able to attend.

It should be clear, then, that the Center for low (under) achieving deaf must offer a comprehensive personal and work adjustment training program along with general education courses if it is to meet the varying needs of these potential productive individuals. Also, it should be clear that due to the lack of numbers in individual states that funds cannot be secured to serve the low (under) achieving deaf on a state-wide basis, but all available statistics point to the fact that there are sufficient numbers to warrant the establishment of not one Center, but several.

The establishment of Regional Industrial Training Centers was discussed quite fluently by the editors of the Little Paper Family in 1892. I am inclined to agree with the Honorable Frank B. Yates, Superintendent of the Arkansas School for the Deaf at this time when he stated, "If you know of any good reasons why a National Center should not be established, state them, of course, but do it now."

THE ST. PAUL TECHNICAL VOCATIONAL INSTITUTE'S TECHNICAL VOCATIONAL PROGRAM FOR DEAF STUDENTS

Robert R. Lauritsen, M.A., St. Paul Technical Vocational Institute

The St. Paul Technical Vocational Institute is one of three Federally funded programs designated to provide post-secondary technical-vocational training for deaf students. This five-year project is funded jointly by the Social Rehabilitation Services and the Office of Education, both of the Department of Health, Education and Welfare. The other two programs, together with St. Paul, comprising the "Triangle Schools," are the Delgado Junior College, New Orleans, Louisiana, and the Seattle Community College, Seattle, Washington. The University of Pittsburgh is responsible for research aspects. June 1, 1971 marked the beginning of the third year of these five-year programs.

The basic responsibilities of this research and demonstration program are:

> To demonstrate the feasibility of using an existing technical vocational institute customarily serving hearing students to serve graduates of secondary programs for deaf students and those deaf students who have for some reason terminated their education prior to the successful completion of a secondary program; and to evaluate this demonstration as it progresses, in such a way that the feedback from the evaluation can be used to maximize its impact—both as a training plan for deaf people and as a demonstration for the establishment of simliar programs elsewhere.

The hypothesis which the St. Paul Technical Vocational Institute (TVI) is exploring in depth is:

> The deaf person can more easily reach his optimum potential if given adequate technical or vocational training in specialized areas using multivariate media in an existing facility and as a result be employed at a level commensurate with his ability.

The St. Paul Technical Vocational Institute

The city of St. Paul has provided technical-vocational education for 48 years. In 1966, the St. Paul Technical Vocational Institute (TVI) moved into its preesnt building, a five-story building with 391,600 square feet of space (over 9 acres) on a site of 21 acres. Replacement cost for TVI in 1971 would surpass $18,000,000 in terms of building and equipment. Daytime enrollment of post-secondary students exceeds 2000 students. An additional 6,500 adults pursue continuing education in the evening school. There are 161 teaching stations with over 180 full-time day staff, and 450 evening faculty.

Because flexibility and adaptability are essential characteristics of technical-vocational education, programs of study offered are:

(a) Short and intensive, to meet specific but limited needs for job entrance or job promotion.

(b) Extensive, in terms of content and time, to meet the needs of beginning or experienced workers for jobs demanding a high degree of skilled and technical knowledge.

(c) Broad, in terms of technical content, with emphasis on complementary subject matter including communications, science, mathematics, drafting, occupational process and practices, and human relationships.

There are four major divisions of training at the St. Paul Technical Vocational Institute comprising 40 areas of training. These four divisions are the Trade-Industrial Program, the Technical Program, the Business and Distributive Program, and the Health and Service Program.

The course offerings at the St. Paul Technical Vocational Institute are constantly scrutinized by advisory committees to insure continuing responsiveness to the needs of the community. Over-all flexibility of the Institute permits timely and rapid additions, modifications and deletions of course offerings to insure the attainment of the basic objectives of the Institute.

The St. Paul Technical Vocational Institute is the largest and most comprehensive of Minnesota's 34 area-technical-vocational facilities. Totally, these 34 facilities represent over 300 areas of technical-vocational training.

There is a commonality of the training available at the St. Paul Technical Vocational Institute and the other 34 area-technical-vocational centers in the state of Minnesota, as compared to other sectors of the United States. This commonality is evident when a comparison of Minnesota's course offerings are made with course offerings of institutes of similar purpose in the United States.

THE TECHNICAL VOCATIONAL PROGRAM FOR DEAF STUDENTS

The Technical Vocational Program for Deaf Students functions as an integral part of the Institute at large. As of June 1, 1971, the Program for Deaf Students staff consisted of: a coordinator, an assistant coordinator, two counselors, three instructors, ten full-time interpreters, a speech therapist, one and one-half secretaries, and selected tutorial staff. The selected tutorial staff consists of three distinct groups of people who have developed sufficient interest and/or communication skills to serve the Project purposes. These groups are: (1) Outstanding regular hearing students at TVI; (2) Members of the regular TVI instructional staff; and (3) Selected hearing and deaf persons from the local professional and business community.

TVI operates on a quarter system. The quarter system permits maximum flexibility in meeting students' needs. Since September 1969, there have been eight enrollment periods for deaf students. This flexibility has permitted 144 deaf students to begin their studies at TVI.

Basic demographic data on the initial 144 students is as follows:

Sex:	
Male	86
Female	58
Total	144
Former educational systems:	
Residential school graduates	96
Day school graduates	41
Nongraduates	7
Total	144
Average age at entrance	19.9 years
Year graduated from high school:	
1971	15
1970	48
1969	48
1968	11
1967	10
1966	2
1965	1
1963	2
Nongrad	7

PREVIOUS POST-SECONDARY EDUCATION

Totally, fourteen students (9.7 percent) attended other post-secondary programs previous to TVI. Of this number, six students (4 percent) attended Gallaudet College. Other post-secondary programs attended by TVI students include NTID, Delgado Junior College, Northern Illinois University, and Mankato State College.

Home States Total—21 States and Canada:

States:	*Total*
Canada	3
Connecticut	4
Florida	2
Illinois	16
Iowa	10
Kansas	3
Kentucky	3
Maryland	3
Massachusetts	2
Michigan	7
Minnesota	49
Missouri	3
Nebraska	5
New Jersey	1
New York	1
North Dakota	6
Ohio	1
Oklahoma	1
Pennsylvania	4
South Dakota	9
Wisconsin	10
Wyoming	1

Reading Scores Gates Reading Test Comprehension Scale For 118 Students Enrolled in Preparatory Program

Gates:	Students
2.5	1
2.7	1
2.8	1
3.1	2
3.3	2
3.4	3
3.5	1
3.6	4
3.7	2
3.8	3
3.9	1
4.0	3
4.2	7
4.3	6
4.4	2
4.5	1
4.8	11
5.0	6
5.2	9
5.3	7
5.4	1
5.6	5
5.8	2
6.2	6
6.5	4
6.8	1
7.1	1
7.2	4
7.3	2
7.4	4
7.6	3
8.2	3
8.6	1
9.1	2
11.3	1
11.4	1
11.5	1
12.0	1

A TVI Diagnostic Mathematics Test was administered to these same students. The test measures knowledge of addition, subtraction, fractions, decimals, multiplication, division, percentages and square roots. (N=118).

Number of correct answers/25:	Students
2	2
3	1
4	6
5	5
6	9
7	4
8	6
9	14
10	14
11	11
12	7
13	5
14	9
15	10
16[1]	9
17	2
18	3
19	2

[1] A score of 16 indicates mathematics competency.

SUPPORTIVE SERVICES OF THE TECHNICAL VOCATIONAL PROGRAM FOR DEAF STUDENTS

The basic supportive services available to deaf students are:

1. The Preparatory Program
2. Intepreting
3. Counseling
4. Note-taking
5. Tutoring
6. Speech Therapy
7. Auditory Training

THE PREPARATORY PROGRAM

The majority of deaf students entering TVI for the first time enter the Preparatory Program. Of the initial 144 students, 122 students have begun their studies as Preparatory Students, while only 22 students have entered directly into regular areas of training. Of these 22 students, 15 were in the initial class of entering students in September, 1969. The primary objectives of the Preparatory Program are to: (1) continue basic education; (2) select a realistic training area and (3) provide a transitional adjustment experience to post-secondary education. Basic courses of the Preparatory Program include: (1) Personal Management, (2) Reading, (3) English, (4) Mathematics, (5) Vocational Exploration, (6) Family Management for Females and (7) Formulas for Males. Optional courses for Preparatory students include: (1) Manual Communication; (2) Speech Therapy/Auditory Training; (3) Physical Education and (4) Individualized Tutoring.

INTERPRETING SERVICES

Interpreting services are an integral part of the Technical Vocational Program for Deaf Students. The primary recipients of interpreting services are deaf students enrolled in regular training programs. Interpreting services are also available to Preparatory students as needed, particularly in Vocational Exploration.

The role and function of the Interpreter cannot and must not be under-emphasized. The Interpreter is "many things to many people," for example:

1. The liaison between the regular instructors and the deaf student(s). Regular instructors, highly skilled in their area of competence, tend to rely on the Interpreter as a second instructor or as a teacher aide.
2. The deaf student(s) tends to look upon the Interpreter as the instructor or as a teacher aide.
3. The Interpreter tends to serve as the "buffer", the intermediary, and the mediator between the hearing students, the instructor, and the deaf student(s).
4. The Interpreter is the *main link* in providing daily feedback information between the deaf student(s) and the Project Staff.

The Interpreter can be the major liaison between the Regular Instructional Staff and the Deaf Project Staff. The Interpreter is called upon regularly to answer a variety of broad-based questions on deaf-educational-rehabilitation, and specifically, pertinent questions on individual deaf student(s).

To date, it is subjectively agreed that the Interpreter is a "less than perfect" substitute for the regular instructor. Stated another way, the Interpreter cannot interpret every thought, every idea, every nuance of the regular instructor to the deaf student. Yet in light of present knowledge, there appears to be no substitute for the Interpreter at the post-secondary level of education in the integrated setting.

The Interpreter, in addition to being highly skilled in manual communication, must also be knowledgeable in a variety of vocational-technical areas of training. As an example, an Interpreter's schedule at TVI might find one Interpreter working in the following areas in one school day: Production Art, Chemical Technology, Physics, Metallurgy, and Industrial Administration. Another Interpreter might follow a schedule of Graphic Arts, Carpentry, Welding, Personal Dynamics and Communications.

A fine line exists between the Interpreter as a "pure" Interpreter or a combination Interpreter-tutor. The fine line is compounded when considering the language handicap of deafness.

Your attention is directed to the paper, "The Interpreter, An Integral Person in Integrated Education," that will be presented by

Mr. Patrick Duggan, St. Paul Technical Vocational Institute, tomorrow morning at approximately 11 o'clock in the Post-Secondary Education Section of the Convention.

COUNSELING

Counseling is the all pervasive service designed to benefit deaf students at TVI. Counseling services during the Preparatory Program have particular emphasis on the selection of a technical-vocational training objective. A prime requisite for completion of the Preparatory Program is the selection of a program of training and demonstrated ability to compete. Consequently, educational/vocational counseling at TVI is very goal-directed. All deaf students have available to them counseling of a personal-social nature.

Counseling services this past year have taken on a new dimension as selected deaf students, as hearing students across the nation, either experiment with or have become active participants in the "Now Generation." Specifically included in this reference are drug experimentation (primarily marijuana) and moral standards differing vastly from those standards of the majority of middle-age America. Also of interest, particularly among male students, is the swing toward the "mod" in clothing and hair-styling. As noted, TVI and other Institutes of similar nature operate in close cooperation with business and industry. The majority of unions and businesses in our part of the country have not accepted "mod" clothing and appearance. It appears, fortunately, that participation in the "Now Generation" is a training-only syndrome, and as graduation approaches for our students a return to more accepted behavior and appearance is the standard.

TUTORING AND NOTE-TAKING

Frequently, deaf students in regular programs can benefit from special tutoring by Project Staff, exceptional hearing students, regular faculty members of selected community resource personnel. The use of tutors has been aggressively determinant of training success.

Note-taking services are another category of supportive services. These services are performed by hearing students who are following the same course of study as deaf students. Volunteers are provided with special notebooks featuring self-carbonized note paper. This particular activity has proven to be of assistance to the deaf student.

DEAF STUDENTS ENROLLED IN REGULAR PROGRAMS

As of June 1, 1971, 106 deaf students were (or had) matriculated in 22 major areas of study at TVI. These areas are:

Apparel Arts
Auto Body
Cabinet Making
Carpentry
Chemical Technology
Cosmetology
Data Processing
Dental Technology
Design Technology
Drafting
General Office Practice
Highway Technology
Graphic Arts
H & R Cookery
Landscape Technology
Machine Tool Processes
Medical Laboratory Assistant
Plumbing
Production Art
Sheetmetal
Traffic Transportation
Welding

As regular students, the deaf students attend classes with hearing students. Average class size at TVI is 19 students. Typically, to date, there are on the average two or three deaf students attending class with hearing students in each of the 22 areas of training listed, with the exception of Graphic Arts and General Office Practices. These two areas have had 26 and 33 students cumulatively to date.

Deaf students are eligible for participation in all regular school activities, and utilize freely all school services. These activities and services include school dances, Student Union, assembly programs, school nurse, social worker, and so forth.

Additionally, deaf students being highly gregarious and well-organized participate in the Collegiate National Association of the Deaf (CNAD), TVID (Technical Vocational Institute—Deaf) Club, selected athletic programs as the Deaf Team, Skiing trips, horseback riding, float trips in the Apple River, and a number of other social-recreational activities.

One of the extra-curricular activities which has become an annual school high-light is the assembly program presented by deaf students. This program plays to over-flow audiences who come on a volunteer basis.

GRADUATES AND EMPLOYMENT OF GRADUATES

Accountability of educational activity can, and does, take many forms. At the post-secondary level, the most pragmatic form of accountability must be appropriate employment of graduates.

June 9, 1971, marked the completion of the second full year of education for deaf students at TVI. During this time period, forty-five deaf students successfully completed their training and were graduated. An additional six students will graduate at the end of this summer quarter bringing the total to fifty-one.

A break-down of graduates by area, and success in employment is as follows:

Fall, 1969	1	Fall, 1970	7
Winter, 1970	1	Winter, 1971	6
Spring, 1970	8	Spring, 1971	21
Summer, 1970	1	Summer, 1971	6

Area	Number of graduates	Number working	Comments
Apparel arts	3	3	In area of training.
Carpentry	1		Waiting for union employment.
Graphic arts	8	8	In area of training.
Graphic arts (graduating August 1971)	(6)	(2)	Two students are on early work release.
Machine tool processes	4	3	In area of training.
Welding	1	1	Do.
Chemical technology	1	1	Do.
General office practice	21	16	The remaining five students are excellent candidates and should be soon working.
Traffic transportation	1	1	In area of training.
Cosemtology	1	1	Do.
Medical laboratory assistant	2		June 1971 graduates.
Auto body	2	2	One of these graduates represents the only student not working in area of training; training interfered by infectious hepatitis.

Summary:

Total number of graduates to date	45
Total number employed in area of training	35
Total number employed outside area of training	1
Total number employed	36
Total number not employed	9

Please note: These students graduated less than two weeks ago. Every expectation is that these nine students will be employed in a matter of days or weeks.

The immediate employment results of TVI's graduates is most gratifying. On-going studies, and planned studies will yield information relative to job stability, job performance, and job satisfactoriness.

Not all students beginning courses of study at TVI have remained in the Program. Summary data on these students is as follows:

Withdrawals	10
Left for work	9
Transferred to rehabilitation centers	2
Transferred schools	2
Married	1
Dismissed	4

The total experience of providing post-secondary education for deaf students in an integrated setting has been highly gratifying and satisfactory to date.

By way of summary, a number of statements can, and should, be made that reflect advantages, and certain cautions of the type of educational program described in this paper. A number of the summary statements can be supported by hard data. Some statements are based on observation-and-experience, and are not readily supported by hard data. No attempt is made to differentiate hard versus soft data since the conviction behind each statement is equal.

Advantages of integrated post-secondary education are numerous. One of the most significant gains involves the deaf students self-perception, and self-understanding as a person who can compete equally with hearing students on all levels—academic, skill training, and socially. Perhaps equally important is the increased perception and understanding of the hearing person towards the deaf person, who realizes through daily contact that the deaf person can participate and compete. Integrated education makes possible opportunity for vastly broadened areas of skill training afforded through existing post-secondary training facilities. As these facilities change curriculums to meet changing market conditions, the deaf person is automatically afforded equal opportunity in acquiring current skills.

Primary cautions for integrated post-secondary education lie in areas of finance, staff, and national guide-lines and regulation of programs. Integrated programs do cost more when viewing required supportive services. Because of the sparsity of deaf persons, regional programs should be encouraged with minimum geographical over-lap. Federal funding remains as the choice for program support. Successful programs require competent staff. Persons appropriately trained for staff positions at the post-secondary level are in short supply. A national regulation body for the establishment of new programs seems appropriate. Obviously, there is more involved in the establishment of programs than the hiring of an interpreter(s) and/or a teacher. An appropriate regulating body should have a key role in assuring programs of excellence.

The advent of integrated post-secondary programs for deaf students has opened up new avenues for improved life-styles for deaf people. The success of these programs is being documented by broadened training opportunities, increased self-awareness of the deaf person, increased awareness of hearing people of deaf people and gratifying employment success. The St. Paul Technical Vocational Institute is proud to have a role in providing "More Opportunities For Deaf People."

OPPORTUNITIES THROUGH TRUE VOCATIONAL EDUCATION

John M. Degler, The Pennsylvania School for the Deaf, Philadelphia

It is becoming more apparent every day that we are on the verge of an educational revolution. This latest of revolutions in the educational domain is the "identifying" of vocational education as a leading element in the total educational system.

Only ten years ago, no voice from any source was heard opposing, criticizing, or praising vocational education. In fact, it was difficult to find many persons who were interested in discussing vocational education at all. This was true even though the predominant element of our society for the past 75 or more years has been industry. More than any other factor, the technological development of industry has and is determining the pattern of our civilization.

But this was all changed with the signing of the Amendments to Vocational Education Act of 1963 into law. We now have a different situation. The role and objectives of our educational system are questioned and criticized because social and economic forces have demanded a change in perspective and attitude. Changing conditions in our society have created an entirely new environment; new insights, jobs, industries, and national objectives.

After years of nurturing, we see evolving in America today a concept in which vocational education and manpower training are being recognized as the mainstream of a total education and training program. Academic and higher education should be open to all who want it and can take it; but we cannot change the fact that perhaps 80 percent of our youth find it "not relevant" to their interests and capacities.

In the years immediately ahead at least a quarter of the nation's youth will be needed in occupations for which a baccalaureate degree is necessary. During the same period more than half of the nation's youth must seek employment in occupations for which a vocational background is required.

An interesting observation is the fact that *right now* we have jobs going begging. Industry has hundreds of thousands of jobs that are not being filled for lack of qualified workers, and these jobs exist alongside millions of unemployed people. This does not make much sense. You would think that through vocational education we would have eliminated that part of unemployment that can be accounted for by not being adequately prepared for the kind of jobs that are available. This certainly is one of the major aims of vocational education—true vocational education.

But even with the existence of all the evidence, an old ailment remains untreated for the most part in many of the nation's schools for the deaf. This is the unintentional regard that vocational education is unimportant. Vocational education is still an undesirable word to many people in our public schools and I am sorry to say in some schools for the deaf. Many parents for instance consider it a program for under-achievers. I am afraid that we as educators have done a very fine job selling the idea that our educational programs should be geared to an elite minority—to prepare the 20 percent for subsequent schooling. Fortunately, there is a national move on at present to do something about providing the education needed by millions of our citizens so that they can be employed.

An analysis made by the American Vocational Association of the 1970 annual reports submitted by state directors of vocational education to the U.S. Office of Education supplied the following facts:

> There were 8,793,960 persons enrolled in vocational education in 1970.
>
> In 1970 there were almost a million disadvantaged and handicapped persons in vocational education: 805,384—disadvantaged; 115,219—handicapped.
>
> The Federal Government invested over 300 million dollars in vocational education in 1970. This represents an increased investment from $25 per vocational student in 1969 to $34 per student in 1970.
>
> According to projections, vocational education programs for 1971 will supply 31 percent of the labor market demands anticipated for the United States. In 1975, vocational education programs will supply only 24 percent of the projected labor market needs. This indicates that vocational enrollments will not keep pace with labor market demands.
>
> The average unemployment rate of vocational education graduates between the ages of 18–24 is 5.2 percent. The average unemployment rate of those in the same group who do not have the advantage of a *true* vocational education background is 24 percent.

These facts are indications that vocational educators in our public schools are beginning to realize the tremendous potential in vocational education programs that are of high quality and oriented to the needs of students of all ages.

In view of these facts, I think that it is time for educators of the deaf to stop talking. We cannot suffer through another 50 years or even 10 years of research, discussions, excuses or promises. I think all of us have read and listened to the results of the many fine studies that have been made, such as: Boatner, Stuckless and Moores "Occupational Status of the Young Adult Deaf of New England" and Lunde and Bigman, "Occupational Conditions Among the Deaf". For the most part all of the studies come up with the same conclusion: the majority of our graduates are not doing well in the world of work.

I think the solution is simple; provide a true vocational program for our students, not excuses or programs that are vocational in name only.

The vocational program which we offer at P.S.D. and the excellent vocational program at the Katzenbach School in New Jersey prove that employment opportunities for the deaf are good—provided they have been trained and prepared to compete in the job market.

There are many reasons given by individuals and schools for not providing a true vocational program but I wonder how valid they are. The following are some of the most common reasons, or shall we call them excuses, given for not offering a vocational program:

> "Automation is now eliminating many manual semi-skilled jobs, blue collar positions and is creating in their place white collar and technician positions which demand more training, more flexibility, more skill."

and right along with this—

> "Today's workers must be prepared to retrain as many as five times during his lifetime in order to keep up with the changing job market."

One of the most exaggerated tales we hear today is the statement of how rapidly new occupations are evolving and old occupations are disappearing. A real good exercise is to try to name three occupations that have actually disappeared in the last 30 or so years. Yes, many have declined in numbers of persons employed, but how many actually disappeared? Equally interesting is to try to name just three new occupations which are not actually a part of, or a modification of, an existing occupation of prior times.

I think we should cease to worry or panic about occupations of tomorrow and provide vocational education for the occupations of today. Our graduates will then be equipped to adjust to and understand the new or modified occupations.

> "The high school is today regarded as the minimum requirement for entering many blue collar jobs. Many white-collar jobs require a minimum of two years of college training for entrance."

These inflated requirements often assumed in statements by educators would not hold up when job analyses are made.

Job task analyses decompose a "job" into its various functional "tasks" and assess the kind and the extent of preparatory training necessary to perform each task at an "average" level of competence. A recent report of the U. S. Bureau of Employment Security, titled "Estimates of Workers Traits Requirements" prescribes both general and vocational requirements for each of several thousand job titles. For most of these, the experts stipulate an average general educational requirement of considerably less than twelve years of school (examples: office machine operator—8 years of school; electrician—11 years; bookkeeper—10 years.)

In fact, a powerful case is being made in most of the "new careers" literature that many of the technological changes have really created jobs that need less academic background. For example, the code inscriber that is now used in banks to (electronic sorting) sort checks needs less skill than the proof machine operator whose job has been eliminated by this new advance in data processing.

It may come as a rude shock to some educators, but the fact is that the jobs and the requirements for the jobs are made by industry, not the schools. Too many of us in deaf education isolate ourselves in the classroom or school shop and teach as *we* believe a subject should be taught with no consideration of industry, its needs, or the training and skills it wants. Educators too often develop a "know-it-all" attitude and as a result do not communicate with industry. When it comes to vocational education, I am afraid there are some who are afraid industry will find out just how much they don't know about the subject.

In a speech before the National Association of Secondary School Principals in Houston, Texas this past January, Dr. Sidney P. Marland, U. S. Commissioner of Education, chided educators for pointing a "God-like finger" at Vocational education. He said that since so few students are ever exposed to vocational education, accusations of failure are illogical as well as a massive injustice.

Then he made a dramatic proposal: "I propose that a universal goal of American education, starting now, be this: that every young person completing our school system at Grade 12 be ready to enter higher education or to enter useful and rewarding employment. I suggest we dispose of the term vocational education and adopt the term Career Education. Every young person in school belongs in the category at some point, whether preparing to be a surgeon, a bricklayer, a mother, or a secretary."

This implies to me that unless the academic leaders in our schools accept their rightful responsibilities in general education for the full spectrum of students, and modify the program accordingly, they will find themselves, not as equal partners in education and training, but rather, in the same position where vocational education was in the total educational program some 15 to 25 years ago.

To be more specific, if those youth and adults who want vocational education had access to a *quality program* of vocational education, most of the present secondary academic programs in schools for the deaf and also the public schools would not have sufficient numbers of students to offer quality academic programs.

Strange as it may seem, most schools for the deaf have accepted responsibility for education for the "world of play" but are considerably less concerned with education for the world of work.

I do not wish to appear to be opposed to programs which have recreational value. I am all for it having coached X-country, track and golf at one time. Physical education and sports are part of and should be of every school's program. I think that we all would agree these things are socially desirable but seldom are these aspects of the school program questioned by taxpayers, parents, or educators.

The point of all this is that many deaf educators do not seem ready yet to put similar emphasis in terms of money, staff, and curricular time on education for the "world of work".

It is hard to find deaf schools providing a comprehensive program which is doing the inclusive job on occupational education that they are doing in the academic area and on education for the "world of play".

The "world of work" should get equal time and equal effort if we are to meet our obligations to our deaf students.

We at The Pennsylvania School for the Deaf do not have a choice as to the type of vocational program we will provide. In the state of Pennsylvania there are more than 3,600 different vocational programs in operation in the state's 500-plus high schools and 60 area vocational-technical schools. Among these programs are 1,300 in business education and 1,100 in trade and industrial areas. Every public high school in the state offers its students business education programs. The state has a total of 350,000-plus enrollees in vocational education programs (250,000 at the high school level). This is topped only by three other states—California, New York, and Texas.

Because of these spectacular vocational educational statistics, we must provide a quality program if our graduates are to successfully compete in the labor market.

In order to provide opportunities for our deaf students through true vocational education, schools for the deaf will have to first stop trying to transfer the responsibilities to the Vocational Rehabilitation Department, public vocational schools and industry through on-the-job training. We are the specialist in deaf education, "the experts"; if we want to call ourselves educators, it is our responsibility to provide an educational program that meets the individual needs of *all our students*. B.V.R.'s job is rehabilitation not education; the local vocational school does not have the personnel with the specialized training and Manpower Administration studies have found private industry does little about job training except in times of crisis.

The following are some of the viewpoints which I feel are essential to the development of a quality program of vocational education. These viewpoints apply to students whether they be youth or adults, potential semi-skilled, skilled, technical or semi-professional workers.

1. The deaf students in our schools as the students in the public schools vary widely in their abilities, interests, and vocational goals. They also differ greatly in personality, emotional stability and maturity, family and home backgrounds, and in physical and mental health. These individual differences must be recognized with a flexible and diversified vocational program developed to meet the needs of all of our students.

This flexibility in the program should provide for open entry and open endeavors—the deaf student or adult could enter the program immediately, at any point in time; could cycle through the training programs at his own rate, and recycle as needed; and enter the job placement process at whatever time he reaches the "breakout" point in an occupational skill.

2. The program should be geared to serve those in school, those who have completed or discontinued their formal education, and those who have already entered the labor market but need to upgrade their skills or learn new ones.

3. The instructional program must be developed from job analyses made of the occupations, so that the skills and related information are realistic in terms of what is required to perform successfully on the job.

4. Skilled trade courses need a minimum student attendance of three continuous clock hours per day for not less than a 2 year period. Courses requiring a high degree of skill because of the greater sophistication of the equipment being used should be maintained for 3 years.

5. Class time allotted for related or academic work should be developed from job analyses and *proven* needs and not from conjectures or convenience of scheduling. For example, mathematics required of a student studying to be a baker should be different from that of a student studying to become a machinist. The course of study should represent honest, realistic educational and training hurdles essential to obtaining an occupational goal.

6. A true vocational program must include a wide variety of occupational choices so that all students may have a choice and a possibility of attaining graduation. The program must include occupational programs or courses which require high and low degrees of skill and academic ability.

7. The students enrolled in any specific program are those who can profit from the instruction and who can *qualify for placement upon graduation.*

8. The program must be conducted by instructors who have had sufficient practical experience through bonafide wage earning experience in the occupation being taught and education and training in the skills of teaching vocational subjects.

9. The equipment and type of work performed should be as nearly like its counterpart in the actual work situation as it is possible to achieve in an educational institution. I might add the amount of equipment is just as important as the type. I recently read a Research Report submitted in partial fulfillment of the requirements for the Master of Science Degree in Business Education by Arvilla Rank. The author made a survey of all the schools for deaf children throughout the United States offering business education courses. Sixteen of the schools surveyed offered a key punch program with 23 key punch machines available in the 16 schools. The Pennsylvania School for the Deaf was one of the 16 schools—we happen to have 7 key punch machines—this leaves 16 machines remaining for 15 schools. These figures suggest that many of the vocational key punch programs offered in schools for the deaf throughout the U. S. are vocational in name only.

10. Vocational guidance is a must in any quality vocational program. First there should be opportunities for a wide variety of exploratory experiences before a student enters a vocational program. When the student is ready to enter a vocational program a guidance counselor should be available to help determine his educational training needs, assist in placement upon graduation and see that follow-up is maintained. The guidance counselor would also maintain close contact between the school and local employment agencies for referral of trainees, opportunities, and changing employment practices.

11. Finally, programs of vocational education should be administered and supervised by personnel who are educated and experienced in vocational education, who are fully acquainted with authoritative occupational information, who understand the needs of the pupils, business and industry and who are able to work effectively with employers, labor, employment agencies, social and other governmental agencies concerned with worker education.

In conclusion, I realize that the title of this paper is "Opportunities Through True Vocational Education" and I have said very little about opportunities. But it is my belief that if our schools for the deaf offer true quality vocational programs, our graduates will not have to worry about opportunities. Of course, the program cannot be vocational in name only, it must be in-depth vocational education based on a thorough study of the fundamental "whys" in a given occupation.

For the young deaf man or woman who has graduated from a true vocational educational program there will be many opportunities because they will have a marketable skill and the future will indeed be bright.

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Library (10:30 a.m.–4 p.m.) ASB Dining Room

Chairman: Anna Huff, Librarian, Wisconsin School for the Deaf. *Recorder:* Mrs. Bryan Harris. Missouri School for the Deaf.

10:30 a.m. "*The School Media Center—A Member of the Team.*" Bill Stark, Director, Illinois School for the Deaf Media Center.

"*Media News.*" George Propp, Midwest Regional Media Center, Lincoln, Nebraska.

"*A Systems Approach to a Media Center in a School for the Deaf.*" Goldie Trboyevich, Kendall School. (*Paper will be read by Dr. Ben Schowe.*)

"*Educational Media in a School for the Deaf.*" Joel D. Ziev, Director, Educational Media, American School for the Deaf.

1:30 p.m., Business Meeting, School Librarians of the Deaf and Associates, Dr. Ben M. Schowe, President, presiding.

THE SCHOOL MEDIA CENTER—A MEMBER OF THE TEAM

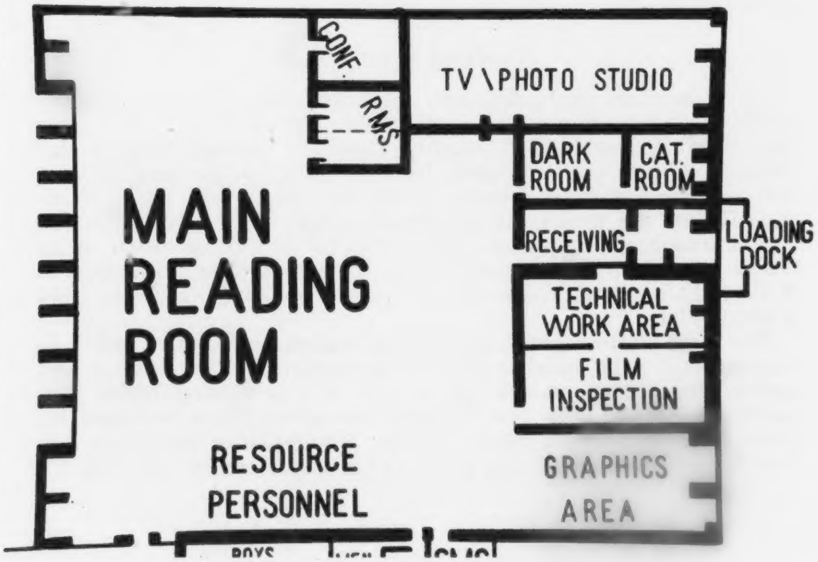
Bill L. Stark, M.S. Illinois School for the Deaf

The Illinois School for the Deaf team consists of administrative staff, teachers and other professional staff, dorm counselors, students, and media center staff. The goal of this team is student learning and understanding.

How does the media center perform as a member of the team? First, the media center works with administrative staff, teachers, and dormitory personnel by providing services and materials necessary to help them achieve their learning objectives effectively and efficiently. Secondly, the media center works with students to provide them with a wide assortment of learning materials to meet their needs.

At I.S.D. we believe that our goal of student learning and understanding can best be achieved by the availability of a combined media center. We are in the process of making a change from the traditionally separate library and audio-visual centers to a combined center, where all resources will be jointly cataloged and available.

Currently, the facilities of the media center are in five different rooms with a total area of approximately 5,000 square feet. However, we are looking forward to September of 1972 when a new media center building of approximately 12,000 square feet will be completed. This new facility will provide for individual and group learning activity, production (T.V., photography, and graphics), and equipment maintenance services. The center will be open nights and weekends.



The staff of the media center consists of the following: a director of learning resources, three media specialists (two book specialists, and one nonbook specialist), a graphic artist, a technician, and a secretary.

Valuable assistance is provided to the team by media center student assistants. Twelve students aid in clerical work, production, maintenance, and circulation of media. All students are paid for their work. Some of the students are assigned to the media center as a part of the work experience program.

A new program started this year at I.S.D. provides for a teacher-media center representative in the four elementary units. As an assigned extra-curricular activity, these teachers initiate and conduct media workshops, distribute preview material, and generally act as the communication link between media center, supervising teachers, and teaching staff.

Each member of the media center staff plays an important role in achieving the team's goal of student learning and understanding. Each member's role is as follows:

I. Director of Learning Resources

His main responsibility is to work with the administrative staff in coordinating a media systems approach within the school. Trained and experienced in both library science and audio-visual, he plans and directs the best implementation of a combined media program. He must also continually assess and evaluate the progress and achievement of the media center.

II. Media Specialists

The book and nonbook media specialists have been working to combine all resources of the media center into a 3" x 5" card catalog. Finding that subject headings used to catalog material for normal children are inadequate for deaf children, the media center has used simplified language to devise its own list of subject headings. When the catalog is completed a copy of it will be in the media center and duplicate copies will be in all the school units. These catalogs will be printed using an addressograph-graphotype system. This system allows the printing of multiple card sets from a single plate.

The same addressograph-graphotype system was used to print the current 8½" x 11" catalog of nonbook materials. Each teacher and supervising cottage parent has a copy of this catalog which contains descriptions of a few thousand resources. These resources include films, filmstrips, slides, records, pictures, kits and other material. Staff or students may come to the media center and look for material, or they may write out a media request form which can be sent to the media center through the campus mail. A student assistant makes daily delivery of requested media to the school units and dormitories on I.S.D.'s 50-acre campus. Media is also available to the teachers through each unit's decentralized collection and through the media center's listings of free loan and rental material.

The media specialist for nonbook materials has the following responsibilities: (1) to initiate the use of instructional media by being familiar with the school curriculum and with unit lesson plans. (2) to assist staff and students in the production of media. Each of I.S.D.'s school units has its own workroom and equipment for production. Each staff member has a copy of the *Mechanics of Media* booklet. Produced by the media center, this 50 page booklet graphically illustrates each production process. (3) to direct in-service and pre-service training. In addition to an on-going program for all staff, special workshops are held for new teachers and student teachers in the production and use of media. (4) to coordinate the preview and purchase of commercially produced instructional media. Last year the media center previewed over $60,000 worth of commercially produced media. Teachers assisted in evaluation of this media by completing media preview and evaluation forms. Information from these forms was transferred to permanent records which were used as justification for purchases.

The two media specialists for book materials perform specialized tasks which include the following: (1) to select and catalog reading materials for staff and students. (2) to provide individual and group reading guidance to students. (3) to teach students the use of the 3" x 5" card catalog and related skills so that students may be able to study independently. The media center has developed an instruction manual entitled *What's It All About.* This manual explains the parts of a book, the differences between fiction and classified books, use of the card catalog, and good library manners—all in a language the students will understand. (4) to encourage reading and language development by developing programs of storytelling, book talks, and book reporting.

III. TECHNICIAN

The technician performs repair and maintenance work on all audio-visual projectors and equipment (approximately 400). He also repairs group aid equipment and supervises students in the maintenance of films in the media center Captioned Films depository.

Not only does the technician repair equipment, but he also designs and develops specialized equipment for use with the deaf and hard of hearing. In the past year he has modified audio-visual projectors for special use, developed a special motorized machine for cleaning acetate projector rolls, and constructed several speech stimulator devices (described in the September 1970 issue of the *Volta Review*).

He also performs a dual role as a photographer. He works with teachers in preparing shooting scripts and then does photography as outlined by the scripts. A completely equipped darkroom and photography studio provide almost unlimited photographic capability. He also guides staff and students in their own photography, encouraging the use of ektagraphic visual makers, instamatic cameras, polaroid cameras, and 8mm cameras.

IV. Graphic Artist

In an old joke, a thief caught in a chicken coop calls out: "There's no one here but us chickens". Teachers of the deaf often find themselves in a similar situation when searching for visual instructional materials. While there has been a multitude of commercially prepared visual and audio materials, the number of those prepared especially for the deaf is limited. It is the job of the graphic artist to work with teachers in translating generalizations and abstractions into a "picture" that can be read, understood, and compared quickly.

The graphic artist is also responsible for guiding teachers in their own production of visuals and in picture preservation techniques. She instructs them in the use of copy equipment, lettering devices, and the drymount press.

V. Secretary

The media center secretary is another valuable member of the team. It is she who performs the myriad of clerical tasks that are essential in the operation of a media center. These tasks include typing, filing, record keeping, and production assignments on the ditto, mimeograph, and photocopier. She is also responsible for the circulation of media to the school units and to schools served by the Captioned Films depository.

MEDIA NEWS

George Propp, Midwest Regional Media Center, Lincoln, Nebr.

It has long been the thinking of the Midwest Regional Media Center for the Deaf (RMC) that the facility would not be able to function at an optimum level until better liaison was established with the school programs for the deaf in the midwest region. It is taken for granted that the RMC does not at the present time have the staff to develop the necessary level of interaction and the likeli-

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[1] Unable to attend due to weather conditions.

hood of acquiring a staff sufficiently large to maintain a working relationship with the more than 100 school programs in the region is quite remote.

One of the most positive developments in schools for the deaf has been the growing number of professionals functioning as media specialists. Whereas in 1965 there was only a handful of these people, it now appears that in the Midwest region alone, we have more than 30 people functioning as full or part-time media specialists. Although these people possess a wide variety of backgrounds and operate under a wide range of expectations, media specialists desire and need a professional level of acceptance within their respective programs.

The 1971 Institute for Media Specialists was conceived as an attempt to simply bring these professionals together and open up lines of communication. The assumption was that, individually, everybody is falling short of the ideal, but that, collectively, the participants would know about everything there is to know in operating an effective Instructional Materials Center (IMC) in a school for the deaf. The resulting plan was to bring 18 people together and put all their know-how into a common data bank. This information would then serve as a data pool for decision making on an individual basis within the local school structure. The pre-institute response to this suggestion was very favorable and is manifested by the fact that we had a great many more applications than were anticipated. While it was the RMC intent to deal with only participants from our own region, it later became possible to invite one representative from each of the other RMC regions. Eighteen participants were invited and three others elected to come as observers and consultants.

Participants invited:

Mrs. Judy Adler,[1] South Dakota School for the Deaf
Miss Janet Bourne, Nebraska School for the Deaf
Mrs. Helen Marie Carlson, Starr King Exceptional Children's School
Miss Ann Davidson, Residential Program for Hearing Impaired Young Adults, DeKalb, Ill.
Mr. Bruce Drackley, Wisconsin School for the Deaf
Mr. Richard Fetrow, Iowa School for the Deaf
Mrs. Lila Griffin, Central Institute for the Deaf
Mr. Vernon Johnson, North Dakota School for the Deaf
Miss Cherie Kling, Southwest Regional Media Center for the Deaf
Sister Christine Kranig, St. John's School for the Deaf
Mr. Charles Leman, Michigan School for the Deaf
Dr. Paul McLelland, Virginia School for the Deaf and Blind
Miss Estelle Provow, North Dakota School for the Deaf

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[1] Unable to attend due to weather conditions.

Mr. Ruben Rakow, Lake-McHenry Regional Program for the Hearing Impaired, Gurnee, Ill.
Mrs. Dorothy Stanfill, Indiana School for the Deaf
Mr. Bill Stark,[1] Illinois School for the Deaf
Miss Virginia Stevenson, Arizona School for the Deaf and Blind
Mr. Gerard Winalski, Kendall School for the Deaf

Observers:

Mr. Robert Davila, Syracuse University, New York
Mr. Joe Domich, Educational Media Distribution Center, Wash., D.C.

Consultant:

Miss Dona Chapman,[1] Oregon College of Education: Deaf

An intense winter blizzard tied up transportation in the midwest at the time participants were expected to arrive in Lincoln, on January 3. Instead of starting on Monday morning the Institute could not begin until Tuesday noon, but of the expected participants only three could not get through.

It was decided early in the planning phase of this Institute that the participants themselves would be the key contributors and that instructional input from the RMC staff would be kept minimal. It should be pointed out, however, that the RMC staff agreed that the media specialists should be brought up to date on recent developments in the areas of system design and in evaluation. The staff scheduled instruction on these two topics.

Many of the participants were graduates of a basic media institute and were experienced in dealing with the realities of media utilization. The major objective of the Institute was to find out how well this instruction and preparation in media use has withstood the test of application. For this reason, the collection and organization of data became the prime goal of the Institute. This report, in turn, is the result of this rationale.

The schedule that follows gives some idea as to how the data collection process was carried out. A formula was developed for providing every participant the maximum opportunity for speaking out. In this procedure, most of the recorded data was collected from small group discussions.

It was also agreed at the outset that there would be no attempt to achieve closure of any kind during the week of the Institute. Included in this report is data acquired from a questionnaire circulated several weeks before the Institute; and the participants were permitted to suggest additions and revision to the draft of this report long after they returned home.

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[1] Unable to attend due to weather conditions.

SCHEDULE FOR MEDIA SPECIALISTS INSTITUTE, JAN. 5-9, 1971.

Tuesday	Wednesday	Thursday	Friday	Saturday
	Problem II: Systems Approach—Introduction, Motivation Phase—Dr. R. E. Stepp. Data Input Phase—Processes/Models—R. E. Stepp, G. Propp. Operational Phase I: Formulation—staff. SMALL GROUPS Objective: Systems document. Evaluation/Review Phase—staff.	Problem III; Training Problems—Date Collection, Catagorization/Classification of Problems—staff input. SMALL GROUPS Review/Synthesis. Objective: Document.	Problem 5: Material Sources—Data Collection, Group Input. Systems Solution. SMALL GROUPS Review/Synthesis. Objective: Document.	Summary/Review nature of follow-up. Evaluation of institute. Procedure for sharing materials. Adjourn.
		LUNCH		
Orientation. Review of problems procedures. Problem I: Task description: Definition and parameters. SMALL GROUPS Synthesis and review. Objective: (Document.) Task Descriptors for an IMC.	Reinforcement Phase 2: Construction. SMALL GROUPS Objective: In-Service Unit. Evaluation/Review Phase 3. Implementation (delayed). 4:30-6:30: Lab sessions.	Problem IV: Problems of Organization/Administration (Data Organization)—staff input. SMALL GROUPS Review/Synthesis. Objective: Document. 4:30-6:30: Lab sessions.	Problem VI: Evaluation Process—What & How, Data Input—Kelly & Hoover. Materials—Programs. Review/Synthesis. Objective: Models/Formulas.	

PRE-INSTITUTE DATA

To serve as a basis of planning and discussion, the RMC sent out a questionnaire to all participants well in advance of the Institute. Data thus acquired served as a basis for planning the Institute as well as a guide for this document. This data was summarized in a paper sent out to participants before the Institute. For the record, this data summary is as follows:

SUMMARY OF QUESTIONNAIRE DATA

(SEE APPENDIX)

Overall, the responses to the questionnaire confirmed our original hypothesis that one of our major problems was that of inconsistency. This is evidenced by the fact that on many of the items the collective responses showed no distinct or clear-cut trends. Knowing that ten affluent students averaged out with ten disadvantaged kids does not make twenty middle-class pupils, we are distrustful of averages when dealing with collective figures of this kind.

The tabulation of questionnaire results indicated that our questionnaire fell somewhat short of perfection. It occurs, belatedly, that when the administration gives you a clear and comprehensive description of your role, you should have been asked whether that is good or bad. Before getting serious about the summarization, it should be explained that the National Society for the Prevention of Cruelty to People has been duly notified to do something about media specialists who work 330 days a year and give 130 percent of their time to the task. (This is closer to the truth than most people realize, as it has been our experience that when the lights are on at night in a school building it is inevitably the media specialist who is working there.)

I. JOB SPECIFICATION

No central trend. It is possible that media specialists are working under a wide range of specifications. Task analysis is definitely needed. Evaluation cannot be effective unless we have a precise and detailed job description.

II. TASK ANALYSIS

Statistics here are contaminated by the fact that a number of people are saying that they are working more than 100 percent. Our averages came out like this:

Percent:

7.5 for repairing equipment.
12.5 for transporting and setting up equipment.
11.5 for irrelevant tasks.
18.7 for in-service instruction.
13.0 teaching and assisting students.
18.7 designing and producing materials.
17.0 administrative work.
10.2 consultation and planning.

This totals up to about 110 percent, which may be nearer the truth than we think. If irrelevant tasks could be eliminated, we would be in good shape. Otherwise, whether you are dealing with a one-man shop or with a fully staffed center, the figures probably tell it like it is.

III. SALARIES

Ten media specialists are paid out of school general funds and six out of special grants. It was noted, however, that these figures are distorted by part-time media specialists who are on the instructional staff.

Media specialists are being paid the same or slightly more than classroom teachers. The comment in the above paragraph again applies. Full-time media specialists are mainly in the range between teachers and principals.

Working days average out to about 9½ hours. Most full-time specialists work ten or eleven months.

IV. BUDGETARY SUPPORT

Support for equipment and materials was overwhelmingly "reasonable". This is contradicted in other questions. Possibly the questions should have been broken down into several categories of support. It is possible that support for equipment could be reasonable, but inadequate for materials.

Data on per capita support for the media center was inconclusive. Three schools are budgeting less than ten dollars per pupil, two are in the 1–25 dollar range, three expend over $25, and seven are unable to say.

V. STAFF SUPPORT

Only three schools have all the staff support that they need. However, we concluded from other data that generally the respondents view themselves as being desperately understaffed.

VI. PROBLEMS

This set of questions was very interesting, but again confirms the hypothesis of inconsistency. The accumulative data tends toward the mean. Clear trends were distinguishable in only one or two areas. (1) media specialists have confidence in what they are doing; and (2) we can identify some cases where this confidence extends only to fairly low levels of media utilization.

Otherwise, most media specialists believe that their facilities are adequate and that materials and equipment are accessible. However, there was a discernible indication that there is room for improvement.

VII. NEEDS

Again a wide range of responses tends to regress toward the mean. The media specialists wish for several things the least of which is more equipment. By a whisker, better organization was the greatest need. Additional staff, materials designed for the deaf, and more time for developing materials were nearly equal and brought up a close second.

VIII. TOPICS FOR INSTITUTE

Rank order of topics on a scale of 1–8, eight having the lowest value:

3.4—preparation of training materials.
3.7—systematic development of instructional units.
4.3—resource center for teachers use.
4.4—organization of materials.
4.5—evaluation.
4.6—advanced training in skills.
4.9—role of media specialist, task description.
6.1—review of skills.

The Institute week was largely planned on the basis of this data. Our major departure will be in the "role of the media specialist". Respondents gave this low priority, but we will give this more emphasis because of its relationship to evaluation.

IX, X, AND XI. COMMENT

There was no way of summarizing or capsuling this data. Most of this information was probably repeated during the week that the media specialists were here. For the present, let us say that it is pleasantly surprising to see the number of things in the process of development.

TASK DESCRIPTION

One of the basic problems to be attacked is the fact that media specialists in schools for the deaf are working under a wide variety of conditions and job descriptions. A media specialist, like a classroom teacher, should have clearly defined goals and objectives. Unfortunately, task descriptions developed for media specialists in public schools are not applicable to people in programs for the deaf.

By and large, media specialists in schools for the deaf are defining their own tasks. This may not be the most professional way of going about it, but for the present it seems to be a better approach than any of the alternatives. We must recognize the fact that conditions from one school program to another are not the same. We have media specialists functioning under every conceivable condition, with a great disparity or resources and facilities. It would almost have to figure that we need a vastly differentiated task analysis, and this can, to a considerable extent, be achieved when the Media Specialist is permitted to attune his skills to the local situation.

The goal was, not to define the role of a media specialist, but, to put together some data so that media specialists in school for the deaf could do their own job description in such a way as to be most beneficial to their own school or in their own development of their roles. It was stressed repeatedly that one task description could not be applied to the role of all media specialists because of the fact that no two of them are working within the same framework of environment, needs, and expectations.

As a starting point, the task analysis used in the pre-institute questionnaire was, although not exhaustive, a relatively true indicator of what media specialists collectively do. The figures revealed by the questionnaire (repeated below for convenience) possibly require some clarification.

Percent:
7.5 for repairing equipment.
12.5 for transporting and setting up equipment.
11.5 for irrelevant tasks.
18.7 for in-service instruction.
13.0 for teaching and assisting students.
18.7 for designing and producing materials.
17.0 for administrative work.
10.2 for consultation and planning.

The data provided above needs to be interpreted in the light of other data revealed during the Institute. Some of the facts to be considered are:

1. The figures represent those individuals who distributed a half-time job on this scale.
2. A similar distortion occurred when we got figures from only one member of an IMC staff. (For example, the figures for administrative work are skewed by the fact that one of the respondents was a full-time administrator, while his subordinates are not represented.)
3. As in most numerative data, the mean figure looks rather respectable, and we need to keep reminding ourselves that among our many school programs there is a glaring imbalance in the services performed by the IMC staff.

Additional data to supplement the figures in the above task analysis was acquired by the simple process of asking participants to describe their facilities and what they were doing. A list of statements that is representative of what media specialists in schools for the deaf are doing is as follows:

1. Trying to catalog films, filmstrips, slides and all other available resources into an integrated card catalog.
2. Maintain contact with teachers and let them know what materials are available.
3. Pulls and delivers materials to teachers.
4. Handles clerical jobs.
5. Repairs equipment.
6. Handles some administrative matters.
7. Reacts to teachers' requests for materials.
8. Teacher in-service training for new teachers.
9. Trains teacher aids.
10. Sponsors projectionist clubs.
11. Produces materials for teachers.
12. Production of printed materials.
13. Constructs media kits.
14. Oversees experimental instruction with Mediated Individual Visual Response (MIVR).
15. Trains students in teacher education programs.
16. Orders and circulates films.
17. Goes on field trips with instructional staff members to give them support and training in production of 8mm films for learning activities.

18. Plans slide series and 8mm films with teachers.
19. Works with school administrators to help them use media in describing school programs to the public and to school board.

Several of the participants explained that they were handicapped in carrying out their functions by inadequate facilities (no facilities at all in some cases). Most of the people are operating in classrooms that have been modified for media center use. Very few schools have specially designed facilities, although several are in the planning stage.

Some IMC tasks of a long range nature may be briefly described as follows:

1. Foster an increasing volume of student traffic in the media center.
2. More advance planning for systematic growth of IMC.
3. Computerizing the catalog.
4. More extensive in-service training programs.

Learning Systems

A unit on learning systems has been developed by the Midwest Regional Media Center for the Deaf. Still in the process of evolution, the unit was only reviewed for this Institute.

Components of the unit on learning systems consist of the following major topics:

1. Overview of Learning Technology.
2. The Role of Multi-Media in the Education of the Deaf.
3. Communication Theory.
4. The Teacher as a Learning Mentor.
5. Development of an Instructional Unit.
6. Programmed Learning: An Overview.
7. Behavioral and Instructional Objectives.
8. Taxonomy of Instructional Objectives.
9. Systems Application to the Education of the Deaf.
10. Strategies of Instruction.
11. Evaluation.

Notes on the topics listed above were provided the participants at the Media Specialist Institute. Dr. Stepp and Mr. Propp discussed certain points of the unit, but made no attempt to cover all the points. In addition, Mr. Ron Kelly of the RMC staff touched upon the role of Evaluation in the overall design of learning. Various questions were answered and readings were recommended for specialists who are weak in this area. The Media Center also demonstrated some of the forms and flow charts that are being used to systematize their instructional efforts and training.

Proponents of learning systems claim that, if God had known what we know about instructional systems, Eve would not have eaten the apple. A statement such as this may be a bit extravagant, but at the same time nobody will argue with the fact that good planning has been the major ingredient of effective instruction since the dawn of man. Feedback from the participants stimulates the following general statements:

1. A system can have considerable flexibility. It can be as simple or as complex as you want to make it.

2. A systematic design provides a basis for decision making before, as well as after, instruction takes place.
3. The systems concept makes evaluation an integral part of the planning process.
4. Facilitating communication between classroom teacher and the media specialist is yet another feature of systems design.
5. A systematic approach serves as the basis of flow charting the development and production of instructional materials.

TRAINING FUNCTIONS OF THE IMC

Thursday morning of the Institute was devoted to the training functions and services provided by school IMC's. Most participants seemed to agree that this was perhaps the most vital service that a media specialist could perform. The procedure for acquiring data in this area was as follows:

In a large group with all participants present, there was some discussion of the importance of training teachers of the deaf to make more effective use of the potential of media in day by day instruction. The large group broke down the topic into three major components, and each component was discussed in depth in a small group session. RMC staff members participated in the small group sessions. Notes were taken at these sessions and group leaders then reported back to the large group for summarization and closure.

It was generally agreed that teachers of the deaf need to attain a level of media skills and competencies which can and has been defined in the educational literature of our day. Stated in equation form, the desired level of media competency minus the competencies that the teacher possesses equals the skills and competencies that must be taught. The three major components in training the group agreed were pre-service, in-service and student training.

I. PRE-SERVICE TRAINING

The following observations came out of small group discussion of pre-service training:

A. Definition

The understanding was that pre-service media training means the training that is provided teachers before they begin teaching in that particular institution.

B. Problems

1. Ideally, a properly prepared teacher would acquire the necessary media skills in teacher education programs. However, this is not happening at this time and may not happen for some time. Under ideal conditions of teacher preparation, the need for pre-service training would disappear and all that would be needed would be a bit of orientation and information on the new techniques and materials that become available.

2. Pre-service training is presently being done in a very haphazard and ineffective way.

(a) Usually done on a half day or a whole day before school starts.

(b) Because of the excitement over a new job, the rookie teacher is minimally receptive to this type of training.

(c) Generally pre-service training is restricted to basic introduction to school equipment—such as, what the school has and where it is stored.

(d) It is difficult, if not impossible, to schedule pre-service training in most school programs.

C. Some solutions

1. Schedule pre-service training on an appointment basis after school hours.
2. Stress motivational aspects of media.
   (a) Use media for instruction.
   (b) Avoid tendency to emphasize mechanical aspects.
3. Establish informal contact with neophyte teachers during their preparation periods.
4. Restrict initial instruction to the media and materials that are available.
5. To some extent, pre-service training can be combined with in-service training.
6. Encourage unscheduled exploration. The teacher must become familiar with what is available.
7. It helps a great deal in this role if the media specialist has had classroom experience.
8. Pre-service training in media can be accomplished most effectively if the school is a practicum for a teacher training program. In this case:
   (a) The media specialist can influence the director of teacher education to provide media experiences within the practicum.
   (b) Student teachers can work closely with critic teachers in producing and adapting learning resources for the deaf learner.
9. Provide each new teacher with a folder or kit containing necessary information for media utilization.

In the large group discussion there was general agreement on most of these suggestions. Several additional recommendations were offered as follows:

1. The new teachers will need models, not theories.
2. Insofar as practical, the instruction should be highly individualized. We need to explore possibilities of programmed learning and automated instructional devices.
3. Sharing of experiences should be encouraged. Teachers with good mediated units should show and share them with new teachers so that media motivation comes from people other than the media specialist.
4. Keep communication channels open. Feedback from teachers is necessary before you can do the job most effectively.

It was also pointed out that pre-service training is somewhat more difficult to plan than in-service training. The neophyte teacher is not sure of what he or she is going to do. It is difficult to see the relevance of media implementation unless related to a specific task.

II. IN-SERVICE TRAINING

A. Definition

In-service training is the media training provided teachers on a continuous and ever expanding basis.

B. Problems

1. Motivating people to attend in-service training sessions.
2. Scheduling this training, particularly in larger schools.
3. The teacher who has a phobia about mechanical things.

C. Some solutions

1. Students can be trained to relieve teacher of the equipment operating problems. Each piece of equipment should be accompanied by a simple diagram and checklist.
2. Training to a great extent must be individualized.
3. Keep essential equipment in convenient places in order to facilitate use and thus make instruction relevant.
4. Many teachers have to be sold—use motivational gimmicks.
   - (a) Displays in teachers' lounge.
   - (b) Show materials on a personal basis.
   - (c) Develop a newsletter and/or make periodic announcements.
   - (d) Sell media with media at staff meetings, etc.
5. Circulate and direct pertinent articles and promotional materials to proper teacher.
6. Acquire media aides to assist the teacher in development and use of media.
7. Organize your IMC so that classroom teacher can find access to needed materials independently.
8. Develop evaluative apparatus to determine media effectiveness of teachers.

One rather startling suggestion that came out of this group discussion was that media specialists might go over planbooks with the supervising teacher in order to spot topics of instruction for which media is available, but it was agreed that planbooks are not sufficiently detailed to make this a viable approach.

III. MEDIA TRAINING FOR STUDENTS

It was generally agreed that this was the most neglected area in training.

A. Purpose

1. Provide students the media proficiency to produce their own materials to interact with class in any specific instructional task.
2. To provide the students additional channels of unimpaired communication.
3. To open the potential of job opportunity in the field of learning technology.
4. Student skill in media use would stimulate teacher utilization.

B. Boundaries of training for students

1. There is the problem of scheduling training for students who mostly are already over-scheduled.
2. The limited opportunity to implement what they learn would tend to deteriorate acquired skills.
3. We should caution against learning media as an end in itself.
4. Student should be able to master all equipment that school possesses.

5. The student should master processes of production to the same extent as teachers, because after all the goal is two-way communication.

C. Some recommendations

1. The Media Center should be open after school hours in order to make this training possible.
2. Schedules should be arranged so that students have opportunity to use media production center without interfering with teacher utilization.
3. Establishment of a media club would provide motivation and stimulate after school use of the IMC production center.
4. In day schools this would require parental cooperation, who, in turn, must be sold on the value of this activity.
5. Special materials need to be developed for instructing students in use of production tools.
   (a) This is a good area for initiating exchange of materials among schools.
   (b) A large proportion of instruction would have to be of an independent nature.
6. Instruction will have to be systematically programmed. Small children would learn simple skills and increase their competencies year by year.
7. Classroom instruction would have to emphasize student participation so that students would see relevance for their media skills.

As part of this unit, the Media Center demonstrated some of the materials developed for in-service training. Also demonstrated were some workshop schedules.

ORGANIZATION AND ADMINISTRATION OF THE IMC

All functions of the IMC in one way or another become administrative or organizational problems; hence it is no small surprise that this chapter deals with nearly everything that has not been covered in other chapters of this report.

In the large group session it was agreed to break down the organization and administration problems into as many components as possible in order to facilitate data gathering. The topics selected for discussion were as follows:

1. The library-media dichotomy.
2. Chain of command and staffing.
3. Developing an IMC "image".
4. Advance planning.
5. Organization of materials.
6. Acquisition of materials.
7. Curriculum Involvement.

Data collected from small group discussion sections can be summarized in the following way.

A. The library-media dichotomy

Most participants agreed that there should be no distinction between printed materials and other learning media, but at the same time, most conceded that they have been more or less helpless in halting the trend toward separation of library and media functions of a resource center. Below are some of the observations recorded.

1. Media specialists agreed that the matter was not merely one of personal ascendancy or dominance. The question is one of effectiveness.
2. It was generally agreed that the initial step in the breakdown of the dichotomy is a master file containing all learning resources.
3. The library and media center should be one physical facility.
4. No one could oppose the argument that the service role of an IMC could be carried out more effectively when the IMC director has had teaching experience.
5. Librarians, it is granted, are coming into the profession with audiovisual training. By the same token, most colleges with media specialization require basic library science courses.
6. Perhaps a new title, Director of Learning Resources, would eliminate the dichotomy.

B. Related to the library-media dichotomy was the chain of command and staffing problem

1. It was difficult to develop any consensus on some aspects of staffing as most of the participants were a one-man staff.
2. Agreement was that in staffing the first priority should go to relieving the media specialist of clerical and cataloging functions.
3. Of some concern was the fact that many media staff appointments are on Title I funds. This tends to put the media specialist into some sort of organizational limbo. This arrangement has some advantages, but there is strong agreement that all library and media positions should possess the permanence of a classroom teacher. Also it was agreed that in a school organizational pattern:
    - (a) The Media Specialist should have rank that approximates that of a Supervising Teacher.
    - (b) The immediate superior of the Media Director should be the Principal or the Assistant Principal.
4. The staff support for the Media Director should be consistent with the goals and media program of the school. As stated above, first priority in staffing should be toward the problem of relieving the Director of clerical duties. Other than that, it was generally agreed that:
    - (a) The first technical person to be employed should be a graphic artist.
    - (b) ITV capabilities and equipment should be supported by the appropriate staff.
    - (c) It is well worth the effort to acquire and coordinate volunteer help—parents or students.
5. Suggested as a comprehensive staff:

Coordinator of learning resources:
  Media specialist:
    Technicians:
      Graphic artist.
      Motion media expert.
      Photographer.
      Secretaries, as needed.
      Clerks, aides, as needed.
      Volunteer help.
      Librarian.
      Assistant librarian.

C. Developing an IMC "image"

Discussion of this facet of an IMC was rather exhaustive. It was agreed that the IMC has a significant role in projecting the school image into the community. However, the concern was mainly with the internal image, the problem of developing good relations with the people who benefit, the school population. Some noteworthy suggestions:

1. Keep on top of teachers' plans. If you know what is going on you are in a position to suggest and recommend. Keep your eyes and ears open in halls, lounges, etc., and develop channels of direct communication.
2. Make classroom observations. This procedure can backfire, unless approach is tactful and constructive.
3. Provide the selection tools that the teacher needs in her specific subject area.
4. Get the teachers interested in in-service training. You should develop an interest in training before workshops and instructional events are scheduled.
5. The Media Director needs to develop a viable working relationship with administration. The IMC must develop awareness, substantiated by facts, that media is helping attain school goals.
6. Developing a working relationship with teachers is most important of all. Some suggestions:
    (a) Develop a media wagon—a cart loaded with materials for a specific unit of instruction.
    (b) Demonstrate to teachers, etc.
    (c) Advertise the Center. Make a big fuss about new materials.
    (d) Have an open house in the IMC for teachers. This may also be done on a more specific scale for departments and subject area teachers.
    (e) Encourage teachers, and assist them, in developing instructional materials.
    (f) The most important thing is to be enthusiastic, to really believe in what you are doing.

D. Advance planning

1. Make precise and reasonable plans for your Center. Have both long-term and short-term goals.
2. Keep a file of your ideas and plans for the future.
    (a) Plans for new facilities.
    (b) Plans for increased staff.
    (c) Plans for unexpected bonanza of funds.
3. Keep abreast of new developments in the media field.
4. Be able to justify any request as being part of a master plan. The chances of obtaining approval of purchases and requests for space are much more favorable if they are planned for.
5. Provide for involvement of all school personnel in your long range planning.
6. Keep feedback channels open, as planning is worthwhile only when attuned to the needs of the school.

E. Organization of materials

It was generally agreed that the time and effort expended in maintaining order is worthwhile. Some suggestions:

1. Have goals and objectives for your IMC and be sure that teachers know what they are.
2. Set up a simple and understandable system for storage and retrieval. It is very essential that teachers, and students be able to comprehend your organizational plan.
3. All equipment should be subjected to systematic maintenance procedures for optimal performance.
4. All learning materials should be cataloged in master file.
5. Keep up to date on new ideas for organization of the media collection.
6. Do not lose sight of the fact that learning materials are for students, not for teachers.
7. Some long term goals:
   (a) Catalog cards or specialized materials on a national basis.
   (b) Computer hook-up for more effective use of materials not immediately available within the school IMC.

F. Acquisition of materials

It was agreed that for a Media Director the most vulnerable position would be to request new materials and equipment when he has shelves full of materials that are not being used. Some recommendations for acquisition of materials and equipment:

1. Don't buy materials for which you lack the equipment, and vice versa.
2. All materials should be curriculum related.
3. Involve the teacher in selection of materials.
4. Do not buy anything without seeing it first. Take advantage of every preview and demonstration opportunity before commitment to purchase.
5. The IMC needs a current and up-to-date file on materials and equipment that is available. These selection tools should be categorized on such a basis that information of a specific nature is instantly retrievable.
6. Route promotional materials to teachers who may have use for it.

G. Curriculum involvement

1. The curriculum for the most part dictates the materials to be purchased. The Media Director who purchases the media must be very familiar with the school curriculum.

2. The teacher, Media Specialist, curriculum planners, and administration should all work together.

3. The most important role of the Media Director in curriculum planning is to define HOW the curriculum is written.

MATERIALS AND RESOURCES

The Friday morning session on materials and resources was initiated with a large group session during which participants received a number of handouts and during which they were shown a number of reference tools that are being used by the Midwest Regional Media Center for the Deaf. It was pointed out that the lists must constantly be revised and kept up to date. Some of the list titles were as follows:

1. Addresses for all centers in the SEIMC—RMC Network.
2. Sources of media materials.
3. Periodicals related to media.
4. Manufacturers and their products.
5. An Instructional Resources bibliography.
6. Criteria for selection of non-book materials.
7. Publishers of textbooks and other teaching materials.
8. Sources of materials on countries.
9. Addresses of specialized agencies of the United Nations.

Some of the selection tools that were demonstrated included the following:

Alabama Rehabilitation Media Service, *Catalog of Audiovisual Materials Related to Rehabilitation*, Auburn University, 1971.

Allison, Mary L., *New Eudcational Materials, Pre-Kindergarten through Grade 12.* Scholastic Magazines, Inc., c1967.

American Library Association, *A Basic Book Collection for Elementary Grades.*

(Davi) AECT, *AVI Guide to New Products*, Dept. of Audiovisual Instruction, Washington, D.C.

Eakin, Mary K., *Subject Index to Books for Primary Grades.* American Library Association, c1967.

Educators Progress Service, *Educators Guides to Free Materials*—Social Studies, Science, Tapes, Scripts, Filmstrips, Curriculum Materials, Films, etc. Annual editions.

The Elementary School Library Collection, Phases 1, 2 and 3. Pro-Dart Foundation, c1966.

General Services Administration, *U.S. Government Films: A Catalog of Motion Pictures and Filmstrips for Sale by the National Audiovisual Center*, 1969. No charge.

Hendershot, Carl H., *Programmed Learning: A Bibliography of Programs and Presentation Devices*, Hendershot Programmed Learning Consultants, c1967, basic bibliography and supplements $27.

Illinois State University, *Library Resources in Special Education*, 1968.

Kansas University SEIMC, *Materials Catalog 1970.*

Kone, Grace Ann., *8mm Film Directory.* Educational Film Library Association, Inc., c1969.

Media Services and Captioned Films, *Catalog of Captioned Films for the Deaf: Educational Titles* and *General Interest Titles.* Dept. of Health, Education and Welfare.

National Audiovisual Association, *The Audio-Visual Equipment Directory*, c1971. $8.50.

NEMIC, *Resource Aid of Speech and Language Materials for the Development of Communicative Skills*, Boston University School of Education. no charge.

Newton, Mary Griffin, *Books for Deaf Children: A Graded Annotated Bibliography*, Alexander Graham Bell Asso. for the Deaf, c1962.

NICEM, *Index to Overhead Transparencies*, R. R. Bowker Company, c1969.

NICEM, *Index to 8mm Motion Cartridges*, R. R. Bowker Company, c1969.

NICEM, *Index to 16mm Educational Films*, McGraw-Hill Book Co., c1967.

NICEM, *Index to 35mm Educational Filmstrips.*

Northwest Regional SEIMC, *Catalog of Instructional Materials and Resource Materials for Teaching and Learning with Handicapped Children and Youth.* University of Oregon, 1969.

SRMCD, *Easy Reading for Deaf Children: A Bibliography*, Captioned Films for the Deaf.

University of Nebraska, *Educational Film Catalog*, 1971–1973.

University of Texas SEIMC, *Instructional Materials and Resource Materials Available to Teachers of Exceptional Children and Youth*, 1969.

Weber, Olga S., *Audiovisual Market Place*, R. R. Bowker, Co., 1969.

The large group broke into three smaller groups each with a specific topic of discussion. The topics and key points raised were as follows:

A. Exchange and dissemination of materials within the school

1. The Media Director should be aware of what is being developed by teachers. Several approaches could be used:

    (a) A common file for teacher produced materials.

    (b) Acquire masters and duplicate the materials for other teachers who need it.

    (c) If teacher wishes to keep her own materials, (she has every right to do so), offer to make a duplicate set for placement in the IMC.

2. Make other teachers aware of teacher produced materials by asking the producer to demonstrate it, etc.

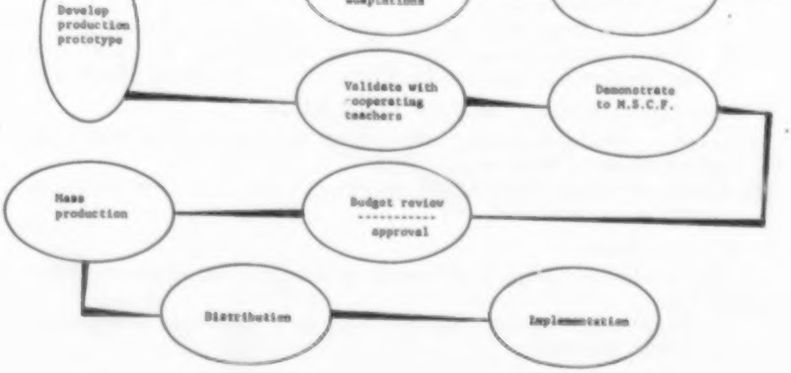
3. There is a problem with teachers who order materials through the media center and then want exclusive possession. Need here is to establish some rules:

    (a) All materials purchased by the IMC will be cataloged and stored by the IMC.

    (b) Materials are loaned for a definite or indefinite period at the discretion of the IMC director.

B. Exchange and dissemination of materials among schools

This is an area in which there has been almost no effort up to this time. Admitting to a lack of experience with this problem, the participants nevertheless agreed that this function would be an appropriate role for the Regional Media Centers. The basic process would be something like this:


Classroom teacher produces instructional material
Try-out with own class
Report to appropriate R.M.C.
RMC staff review
Modifications and adaptations
Develop production prototype
Validate with cooperating teachers
Demonstrate to M.S.C.F.
Budget review
approval
Mass production
Distribution
Implementation

C. Making optimum use of materials on the IMC shelf

1. A comprehensive catalog is essential. Possibly color coded or use some other appropriate means of combining materials.
2. Materials should be readily accessible.
3. Frequent demonstration of what is available will call attention to materials.
4. Emphasize the broad range of materials available.
5. Encourage browsing.
6. Publicize your functions via bulletins, newsletters, stimulating announcements, person-to-person contacts, etc.
7. Develop confidence in use of materials by keeping equipment in order.
8. Make IMC available after hours. Give people who want to work in the IMC a key of their own.
9. Make every visit to the IMC successful in some way—if you don't have needed materials, sell him the necessary formula for obtaining them.
10. Believe in media—this is the most effective sell.

D. Commercially available resources

Institute participants are aware of the growing proliferation of materials on the commercial market. They are aware of the fact that much of the research done to "prove" new materials has been done by the producer. Some essential guidelines for the purchase of commercial materials are:

1. The bulk of the materials available are for various reasons not suitable for hearing impaired users, and there is no reliable criteria for making the necessary decision as to whether material is or is not suitable for the deaf.
2. Sometimes minor adaptions can make commercial materials effective with the hearing impaired.
3. Always, consult the classroom teacher who will use the materials.
4. Never buy anything sight unseen.
5. Consider durability of the things you buy.
6. Don't load your shelves with stuff just because it is free. Free materials should pass the same examination as purchased materials.
7. Purchase from sources that provide adequate services.
8. Attend conventions, conferences, workshops, etc., and find out from classroom teachers what they are using effectively.

E. Materials available from IMC's and RMC's

1. Need to establish contact with these agencies. They will keep you informed as to what is available.
2. Communication with these agencies should be two way—let them know what you need.

F. Selection tools

A list of selection tools is provided in the previous chapter. Other suggestions:

1. Keep teacher lounge stocked with new materials and promotional literature.

2. Inform teachers as to what is available from community, state, regional and federal agencies.
3. Your selection files should be organized in such a way that the teacher can comprehend it.

The Role of Evaluation in the IMC

On Friday afternoon the processes of evaluation were discussed in relation to the function of the school IMC. Evaluation, while given a great deal of lip-service, is often the most neglected aspect of an IMC program. Although it is obvious that media specialists/educators continually conduct an informal assessment of their educational programs, it is also true that as a profession, they have failed to formalize these evaluation procedures.

The main purpose of this session was to point out the need for formalizing the evaluation procedures of an IMC program in order that this evaluation data could be retrieved and effectively utilized in the decision-making process. Evaluation data should be used as a basis for improving and modifying the IMC program.

The session began with an overview of the evaluation process, with particular emphasis upon the rationale for conducting evaluation. A group discussion of these issues followed. Suggestions were also provided for relevant areas to be assessed, and some possibilities on how to gather information.

Evaluation must be an intrinsic part of the planning process. Basically, all phases of planning can be condensed into three main components: (1) establishing purposes and specific objectives; (2) developing procedures to carry out these objectives; and (3) determining to what extent the objectives are met. If these three components are essential to the planning process, then obviously the concept of "evaluation" is vital from start to finish. *How one determines whether the objectives are met is the crucial issue.*

It is the contention of the staff at the Midwest Regional Media Center for the Deaf that in order to assess "the extent to which the objectives are met", *one must use a formal evaluation procedure* based on *a "multiple measure" approach.* In short, using a *combination of methods* to gather information in order to avoid sharing the same weaknesses.

It was generally conceded that the main purpose of an IMC was to serve the teachers and help improve teaching/learning processes for the students. Following is a list of areas that we believe an IMC director *should* be gathering information about:

1. Teachers' use of the IMC services.
2. Teachers' opinions, ideas, expectations of the IMC (How do they compare with the IMC personnel's view of the IMC?).
3. Students' use of the IMC services.
4. Effectiveness of "special" IMC programs such as workshops, in-service, etc. (What do the teachers do with the skills and information acquired in these "special" programs?)
5. Media/equipment utilization (frequency of use to determine future acquisitions).

6. Effectiveness of media/equipment. (Reliability, performance, etc.)

This list was not considered to be all inclusive, but merely as a basis for discussion.

In addition, a variety of examples of checklists, forms and questionnaires were provided.

1. *Checklist*, teacher use of IMC.
2. *General information*, types of questionnaires one could use.
3. *Checklist*, student use of IMC.
4. *MIVR Use Record.*
5. *Permission to record form.*
6. *Checklist*, Media/equipment, frequency of use.
7. *In-classroom observation form.*
8. *Pre-institute Questionnaire*, MRMCD.
9. *Assessment of Educational Media*, MRMCD, 1970.
10. *Bibliography* regarding evaluation.

The above examples were to be considered as resources for developing other data-gathering tools, *not* as the right way to gather information.

The *solution* to the problems of evaluation in the IMC can be solved in several ways. *First*, if each IMC undertakes a formalized procedure for collecting and maintaining information on the functions of the IMC. *Secondly*, if each IMC uses this information in their decision-making process for improving the IMC program. And *finally*, if this information is shared with the other IMC's so that we may all improve our programs on the basis of evidence.

FEEDBACK AND CONCLUSIONS

The general reaction to the one-week Institute was highly favorable. A general consensus was reached on the following topics:

1. It was generally agreed that the Institute should be a continuous thing and that a similar date is, in spite of weather variables, probably most satisfactory for a variety of reasons.
2. It was agreed that the same people should return, but this also raised the suggestion that all people who function as Media Specialists should have the opportunity to attend a function of this kind. Day school specialists, functioning in a part time role, need this as well as people from relatively sophisticated centers.
3. The participants' general reaction as to whether other RMC's should have a similar institute was a resounding "YES". (People present from other regions were asked to make a "push" for this.)
4. The response to the idea of establishing a formal organization either regionally or on a national basis was generally favorable. Most participants felt that the work of the Institute should be fostered by a continuous effort.
5. One of the specific recommendations was that the Center send out a memo in September to establish communication toward the goal of regional cooperation and exchange of ideas/materials.

APPENDIX A

MEDIA SPECIALISTS INSTITUTE INFORMATION QUESTIONNAIRE

We recognize that this is a very long questionnaire, however, we believe that it is an important source of information for us in serving you when you arrive in Lincoln for *your* Institute. Therefore, please be careful in completing this information. Your accuracy will be reflected in the quality of Institute activity.

I. *Job specifications.*—(Mark one or more statements that apply to your situation *after* you have read all of them.):

__ 1. I have written my own specifications for my job.
__ 2. I have written the specifications for my job and have given the specifications to the administration as well as teaching staff.
__ 3. My administration has provided a clear and comprehensive description of my role.
__ 4. The teachers have a clearer understanding of my role than the administration.
__ 5. Nobody seems to understand what I am supposed to be doing.

II. *Task analysis.*—The following statements are representative of the tasks and activities which media specialists generally do. Break the following eight statements into percentage of time spent on each activity. To illustrate:

Sample: 15% Repairing equipment.
5% Carrying and setting up equipment.
0% Doing things completely irrelevant to learning resources.

Please complete:

__% Repairing equipment.
__% Carrying and setting up equipment.
__% Doing things completely irrelevant to learning resources, (e.g., substitute teaching, or janitorial duties).
__% Pre-service and in-service instruction to teachers.
__% Teaching and assisting students in media productions.
__% Designing and producing media materials.
__% Administrative work.
__% Consultation and planning meetings with the administration and/or teaching staff.

III. Part A: Fiscal matter (check *only* one statement).

__ My salary comes from the school general fund.
__ I am paid out of special grants or Title 1 funds.

Part B: Salary comparison (check *only* one).

__ My salary is on the same salary schedule as the classroom teacher.
__ My salary is less than the classroom teacher.
__ My salary is above the schedule of classroom teachers but less than principals or supervising teachers.
__ My salary is above principals or supervising teachers.

Part C: Number of contract working days.

How many days are you to work according to your contract (e.g., 180 days, 220 days, etc.).

__ days according to my contract.

IV. *Budgetary support.*

A. The support for new equipment and materials may best be described as: (check *only* one).

__ inadequate.
__ reasonable.
__ lavish.

B. Support for my media center annually amounts to about: (check one *only*).

__ less than $10 per pupil.
__ between $10 and $25 per pupil.
__ over $25 per pupil.
__ unable to say.
__ other.

V. *Staff support:* (check the appropriate blanks).

__ I am a one man media staff.
__ I have the occasional assistance of volunteers and student assistants.
__ I am provided clerical support as needed.
__ I have all the staff support that I need.

VI. *Problems:*

Part A: Attitudes and beliefs (check the extent to which you agree or disagree with the following statements by circling the appropriate letter). The letters mean the following:

SA—Strongly agree.
A—Generally agree.
U—Undecided or neutral.
D—Generally disagree.
SD—Strongly disagree.

(Use the comment line if you want to explain your answer.)

SA A U D SD 1. No one really understands the role of media in the educational process.
Comment: ____________

SA A U D SD 2. We have too many veteran teachers who have difficulty in making change.
Comment: ____________

SA A U D SD 3. Administrative support for the media specialis. is not aggressive enough.
Comment: ____________

SA A U D SD 4. I myself perhaps lack confidence in the role of media.
Comment: ____________

SA A U D SD 5. There are not enough teachers with media training on my school staff.
Comment: ____________

Part B: Facilities and schedules (same instructions as in the above Part A).

SA A U D SD 1. I do not have the equipment to do the job as well as I would like.
Comment: ____________

SA A U D SD 2. The facilities in my school are not adequate.
Comment: ____________

SA A U D SD 3. I have all the equipment I need but it is not sufficiently accessible to users.
Comment: ____________

SA A U D SD 4. I have enthusiastic people who do not have sufficient time to develop media materials.
Comment; ____________

SA A U D SD 5. There is no provision for students to use the center.
Comment: ____________

SA A U D SD 6. The students have permission for using the media center but are not freed to do so.
Comment: ____________

VII. *Greatest needs:* (rank order from one to five with one being highest and five being the lowest value).

— More equipment
— Better organization
— Additional staff.
— Materials designed for use with deaf children.
— More time for developing materials.

VIII. The scheduled Institute at the MRMCD would benefit me most (rank order from one to eight with one high and eight having lowest value).

— Preparing materials for pre-service and in-service training.
— Review of skills (which of the following).
  — transparency production.
  — ITV skills.
  — 2" x 2" slides.
  — 8mm movies.
— Advanced training in skills.
  — ITV productions.
  — slide/sound sync programs.
  — 8mm sound movies.
  — programmed instruction.
— Getting some sort of general agreement on what a media specialist's role really is.
— Systemmatic development of instructional units.
— Organization of materials within the center which you operate.

__ learning about resource centers for teachers' use and for selecting materials.
__ How to evaluate the effectiveness of my media center.

IX. Write briefly some of the activities and productions which your media center is currently engaged in. For example, pre-service, and in-service workshops and developing learning materials, etc.

X. What activities do you expect that you will be doing at the MRMCD during your Institute? (Write a brief paragraph.)

XI. Write any other comments which you believe that would be of service to us to help design the learning experiences which will occur during the Institute for Media Specialists here at the MRMCD.

A SYSTEMS APPROACH TO A MEDIA CENTER IN A SCHOOL FOR THE DEAF

Goldie Trboyevich, M.S., Director of Media Services,
Kendall School for the Deaf (read by Dr. Ben Schowe)

There is a saying among school librarians that a library should be the hub of a school. Perhaps this should be changed to, "the Media Center" should be the hub of a school. This position cannot be attained merely by the acquisition of mountains of materials. Staff, budget and physical plant are, naturally, extremely important. Equally important, perhaps in some respects even more important, is the organization. Without proper organization there is no efficient retrieval. Without such retrieval, there is little or no usage of materials, simply because they are not readily available. As a rule, teachers do not have the time to spend searching for materials. When they want something, they want it RIGHT NOW. Knowing this, we have tried, at Kendall, to build a Media Center that would answer these needs.

Our library is really a resource center. All kinds of materials are catalogued and stored in the library "complex".

We have experimented with different methods for cataloguing media and have devised a system which works well for us.

The system of organization utilizes color. These colors are used in the card catalog, i.e., the cards have colored bands across the top to denote types of media. They are then interfiled in the general catalog with the book cards. Title, subject, and any other kind of card that might be helpful are made. It is a simple matter to find out what is available and to locate it within a few minutes, because all these materials are housed in the library.

We use Dewey numbers for books only. The call numbers for the media are either accession or space numbers.

Transparencies

As each set (or individual) transparency is catalogued, it receives an accession number which is preceded by a TR. For example, TR1, TR2, TR3, etc. Individual transparencies receive one number only. Sets are given an additional number, i.e., TR4. The main card will have this number on it. (1–6) This shows there are six transparencies in the set. If a set is on mathematics, there will be a general subject card on mathematics. If two transparencies in that set deal only with fractions, then a subject card will be made. The call number there will read TR4, but in the heart of the card it will show that numbers 3 and 4 are specifically about fractions. Usually only title, producer, and call numbers are on the cards. Other information is included if it is deemed necessary or helpful. The color band on these cards is purple.

STUDY PRINTS

These are catalogued in basically the same manner, with the exception that the call number is preceded by SP. The color band on these cards is yellow.

SLIDES

Slides also are done this way. However, because space for a number on a slide is limited, it is written SL37(6). The last number tells you that this is the sixth slide in the set. Only the main card will have SL37 (1–72) on it. Here the color band is brown.

PHONORECORDS

These are divided into two categories, single records and albums. The call numbers are accession numbers. R1, R2, etc. for the single records, and RA1, RA2, for the albums. There is a title card for every song or sound effect on each record. If "a baby crying" sound effect is desired, the teacher has only to look that up in the card catalog and she will be able to locate quickly the proper record. Subject cards are also made, i.e., patriotic songs, marches, etc. The color band for records is green.

8MM FILMS

Most of our 8mm films are in cartridges. They have accession numbers also but they are preceded by *FL*. In order to distinguish between a regular and a super 8, we merely add an *r* or *s* to the number. FL6r, FL12s, etc.

16MM FILMS

The 16mm Captioned Films are assigned numbers by the Media Distribution Office. We add an *F* before each number. On each main card, we include information such as title, b/w or color, length, a synopsis, grade level and suggested area of usage. On the subject cards, we include call number, subject and title. The color band is black. Films purchased by Kendall School, are catalogued the same. The only difference is the call number which is preceded by a KSF.

FILMSTRIPS

Filmstrips are assigned space numbers. We house our filmstrips in drawers which are divided into 100 spaces and each space is numbered. The drawer itself is divided into two sections, therefore there are two sets of numbers, 1–50 in each section. The first drawer is labeled A on the left, and B on the right. The filmstrips, then, have numbers A–1, A–2, B–1, B–2. All filmstrip containers have these numbers on both the cover and the bottom. Each filmstrip is previewed so that it can be catalogued in detail in order to ensure every possible usage.

As stated before, these cards are interfiled in the general card file, with two exceptions. The 16mm film cards are filed separately because we are not satisfied that we have made enough subject cards. We feel that each film has more usable information and so we keep adding subject cards. Later we may decide to interfile. The filmstrip cards not color coded because we started this system long after we had acquired and catalogued an extensive filmstrip collection; besides, the teachers like it as it is.

Pamphlets are catalogued only if they are for professional use. We have a short form, whereby we use part of a Dewey number and some letters. It is again, a system which we devised. It is simple for us to use and retrieval is quick. However, it needs to be expanded and some kinks need to be ironed out. The color band is orange for pamphlets.

All other pamphlets are simply filed in a vertical file under subjects which have been verified and are standard. They are the same subject headings which are used on all our materials. See and See also cards in the main catalog refer to the vertical file.

Our check-out system is quite simple. Books are checked out in the usual manner, that of signing one's name on a book card. All other materials are checked out by filling in the proper information on printed forms.

We consider our color-coded system to be quite good, but we are constantly looking for better and more efficient ways of organizing materials. One of our goals is availability. We know that availability is the key to usage and awareness of our Media Center and with this knowledge, we hope to attain and retain the position of "the hub of Kendall School".

EDUCATIONAL MEDIA IN A SCHOOL FOR THE DEAF

Joel D. Ziev, Ed. M., Director, Educational Media,
American School for the Deaf

Over the past decade the function of Educational Media has evolved from the A–V man or Librarian performing a relatively limited function in education to the Educational Media Specialist, responsible for a strong supportive role in meeting the educational needs of children. This change has been brought about by a clearer understanding that mediated instruction is not just equipment; it is an active relationship between learning and behavioral objectives, curriculum, teachers, and media specialist, all working together to meet the individual needs of children. The Media Specialist cannot work independently of the teacher or the curriculum. He must be prepared to take an active role in assisting other professionals in determining the appropriate medium for reaching established objectives and working directly with the teacher in developing the utilization of the designated medium.

To meet these changing objectives the American School for the Deaf has organized all areas related to media into one administrative unit. These areas include:

Upper School Library
Primary Library
Pre-Primary Library
Captioned Film Depository
Educational Media Center
Teacher Work Rooms

These areas, though decentralized, work as a closely knit unit providing comprehensive media services to both teachers and students. The staff includes a Director, Head Media Librarian, two Assistant Librarians, a Graphic Artist, two Production Assistants, a Secretary, a Clerical Assistant and several volunteers.

The libraries catalog and maintain all material, including books, periodicals, professional literature, captioned films, 8mm films, filmstrips, 2x2 slides, transparencies, pictures, etc.

The Educational Media Center is responsible for the procurement and dissemination of commercially prepared material and for the production of original material relevant to the curriculum. This production capability includes transparencies, 8mm films and film loops, 2x2 slides ,filmstrips, video tapes, pictures and charts.

Included in the Center is a three-camera closed circuit television studio which enables the recording of programs created and produced by both teachers and students for self-evaluation and viewing in the classroom and dormitories. An example of this would be our Thursday Night News. At 6:30 every Thursday night, the 11B class has been presenting a 20 minute program. They gather, write, edit, and present school news along with an editorial, interviews and special events. All Junior and Senior High students view this program in their dormitory lounges. The Center is also capable of recording programs from network TV and replaying them at a time more convenient to both students and teachers.

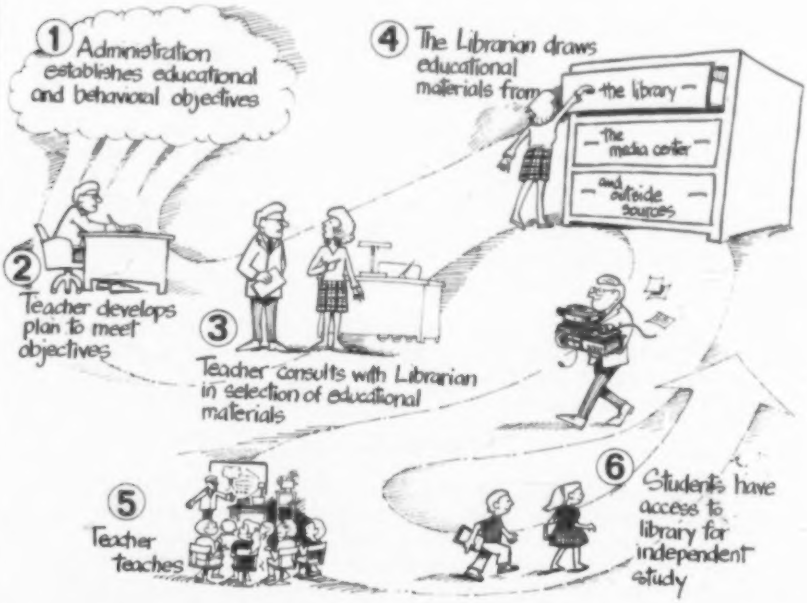
A portable battery-operated television recording-playback system is available for remote recording of field trips, classroom work, athletic self-evaluation and any similar work requiring remote operation and/or instant replay.

Mediated Individual Visual Response (MIVR) laboratories for small group interaction have been established within the primary and secondary departments. These have been set up by the North East Regional Media Center.

With all of these resources now available to the educator, it becomes the responsibility of the educational media specialist to keep abreast of the expanding potential of media within the curriculum and to work closely with teachers in developing the most effective teaching/learning process. "As a teacher plans a unit to be taught he must analyze the subject in terms of structure, scope, and suitability. At the same time he must consider the learner and his role in the lesson. In choosing materials and planning learning experiences, the teacher will have to determine what ideas will require prolonged study; which phases call for interaction between teacher and pupil or between pupil and pupil; what section of the lesson should be designed as simulated learning; when it is the appropriate time for the student to experiment; to visit or to perform, and what is the ultimate application that is to be made of these ideas by students."[1]

An Educational Media Department must be organized to serve the educational needs of our deaf children. We must effectively merge the Library and A–V Center into a single unit under a Media Specialist who must be prepared to work in all areas of educational media. This individual in consultation with teachers, supervisors, and administrators must be able to objectively select educational material, both print and non-print, that will best meet the learning needs of children. (See Fig. 1.) If the appropriate media is not available then this specialist must be able to design original materials to meet these specific needs. The media specialist, therefore, must have a comprehensive knowledge of Curriculum, Library Science and production technique, and he must be supported by a competent production and clerical staff. (Fig. 2.)

We have come a long way during the past decade, and still have a long way to go; however, we have developed the idea that media is not an afterthought in instruction but rather should be considered an integral part of the learning process.


① Administration establishes educational and behavioral objectives
② Teacher develops plan to meet objectives
③ Teacher consults with Librarian in selection of educational materials
④ The Librarian draws educational materials from
– the library –
– the media center –
– and outside sources –
⑤ Teacher teaches
⑥ Students have access to library for independent study

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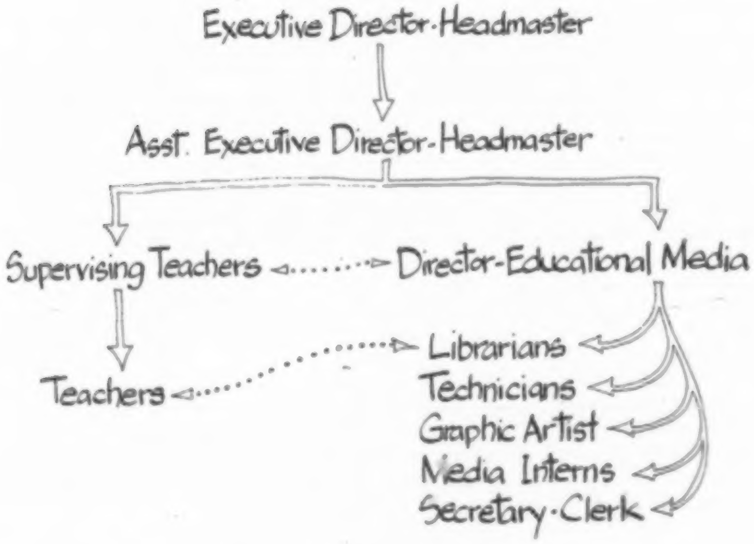
[1] Stepp, Robert, "Educational Media and Deaf Education", in *Volta Review* (Sept. 1968, pp. 465–471).



BUSINESS MEETING—SCHOOL LIBRARIANS OF THE DEAF

MONDAY, JUNE 28, 1971—LITTLE ROCK, ARK.

The meeting was called to order by the president, Dr. Ben M. Schowe, Jr., MSSD, Washington, D. C., who asked for the reading of the minutes of the Berkeley meeting by the secretary, Mrs. Mildred Gay, Oklahoma School for the Deaf. The minutes were approved as read. The treasurer's report was given by Henry Buzzard, New York School for the Deaf, White Plains, and was approved. Mr. Buzzard accepted payment of dues for the coming two year period.

Dr. Schowe mentioned that Mrs. Lucille Pendell, Gallaudet College librarian, is working on an idea of central dissemination of library catalog cards for all media.

Reports were made from the following standing committees:

MEMBERSHIP

The chairman, Mrs. Agnes Orr, Utah School for the Deaf and Blind, has collected a list of all the media people she knew, and she asked for additions to the list. One year, she sent out a letter to them, asking them to come to our meeting, and the Newsletter was sent to them this year. The list is a sort of prospect list, not a list of people eligible to vote, though some have joined and are eligible.

PROGRAM

The chairman, Mrs. Anna Huff, Wisconsin School for the Deaf, reported that her committee has completed its duties—the program was presented during the morning session. Mrs. Huff, automatically moves from her office of president-elect to become the next president of SLD.

PUBLIC RELATIONS

Dr. Schowe reported for the chairman, Sister Rose Veronica, Chevrus High School, Boston. Sr. Rose has worked faithfully with our Newsletter for the entire six years of our organization's existence, but she has now decided that she must resign as chairman and editor. One issue of the Newsletter carried the history and purpose of SLD, written by Mrs. Gay.

Old business was asked for, and Mrs. Orr encouraged all those present to join SLD, and to solicit membership among their friends.

Under new business, there was a brief discussion of a new constitution that will include both librarians and media specialists. Mrs. Huff moved that we meet Tuesday, June 29, to work more on the constitution. Motion carried .

The nominating committee chairman, Mrs. Gay, reported that the following had accepted nominations for offices:

President-elect—George Propp, Midwest Media Center, Lincoln; Bill Stark, Illinois School for the Deaf.
Secretary—Mrs. Ann Bennett, New Mexico School for the Deaf.
Treasurer—Mrs. CaSandra Ramey, Alabama School for the Deaf.

Nominations from the floor were:

President-elect—None.
Secretary—Robert Wills, Kansas School for the Deaf.
Treasurer—Henry Buzzard, New York School for the Deaf.

Officers elected were:

President-elect—George Propp.
Secretary—Robert Wills.
Treasurer—Henry Buzzard.

Meeting adjourned.

MILDRED GAY, *Secretary.*

Principals and Supervising Teachers (10:30 a.m.–4 p.m.) Upper School Library

Chairman: Winfield McChord, Jr., Principal, Kentucky School for the Deaf.
10:30 a.m.–11:15 a.m. *"Toward Creating Effective Learning Environments at the Model Secondary School for the Deaf"*. Rene Kieliger, Coordinator of Instruction, Model Secondary School for the Deaf.
11:15 a.m.–11:45 a.m. Question–Answer Period.
1:30 p.m.–2:30 p.m. *"Organization and Administration of ETV–CCTV in Schools for the Deaf,"* H. G. Royall, Assistant Superintendent, North Carolina School for the Deaf, Morganton.
2:30 p.m.–4 p.m. *"The Organization and Administration of Parent Education at the Carver School for the Deaf"*. Steve L. Mathis, III, Principal, Carver School for the Deaf, Gambrills, Maryland.

TOWARD CREATING EFFECTIVE LEARNING ENVIRONMENTS AT THE MODEL SECONDARY SCHOOL FOR THE DEAF

Patricia Rene Kieliger, M.A., Coordinator of Instruction, Model Secondary School for the Deaf

The nature of MSSD, after ten months of operation, remains something of an amorphous, still unrealized concept. It is impossible to tell, after such a short testing period, what all the ramifications and problems are in such an experimental school where continually unfolding situations make it the great adventure it is.

In this paper I will try to give you a brief sketch of the school population and organizational structure; an overview of the philosophy of the Division of Instruction, and a summary of the school year.

You must, however, keep in mind Allen's law that "everything is more complicated than it seems to most people," so that you realize the difficulty and at times impossibility of capturing in a brief paper the life history of a new and experimental school.

The agreement between Gallaudet College and the Department of Health, Education and Welfare requires that MSSD operate "a model secondary school for the deaf for the purpose of providing day and residential facilities for secondary education for persons who are deaf, in order to prepare them for college and other advanced study and to provide an exemplary *comprehensive* secondary school program, the objectives of which will include preparation of students to the maximum extent possible to be independent and contributing members of society, at their respective levels of functioning, upon completion of the program." *(1)*

The basic requirements for the student population are: (1) live in the five state area surrounding the District of Columbia (2) have at least a 70db hearing loss in the better ear (3) read on at least a third grade level (4) be 14 years of age and have completed an eighth grade education or the equivalent thereof, and (5) have no other major physical handicap except deafness.

This year we accepted eighty students ranging from 14 to 21 years of age with the mean age being 16.3. The average reading level was about fifth grade. The majority of the students were from the District of Columbia and Maryland; other state areas, however, were represented. They came to us from every type of educational facility, but the majority had a rather highly structured and supervised educational experience.

Most of the staff were as new to the school as the students. The majority were hired July 1, 1970, and were involved in a summer staff development program. Generally, the teachers were experienced high school teachers with a master's degree in the subject which they would teach. Although a few had a master's degree in Special Education of the Deaf, nevertheless, for most, September would bring the first experience in teaching deaf students. Out of last year's teaching staff of 33, 7 were deaf.

The operating structure of the school falls into four divisions under Dr. Doin Hicks, the MSSD Director: the Division of Professional Services; Division of Instructional Systems and Media; Division of Research, Evaluation and Curriculum Development; and the Division of Instruction. Generally speaking, the first three divisions act in a service capacity to the Division of Instruction.

Because the major portion of my paper concerns the Division of Instruction, I would first like to make a few comments about the activities of some of the departments under the other divisions. Their services, however, go far beyond the brief remarks of this paper.

The Division of Professional Services is headed by Mr. Victor Galloway. The services provided presently by this Division are (1) Hearing and Speech Services; (2) Counseling program; (3) Student Health Services; (4) Social Services; (5) Residence Hall Counseling and Management, and (6) School Admissions.

The general objectives of the Hearing and Speech department are:

(*a*) Acquisition of those skills that will enable the student to reach his potential for meaningful receptive communication through the optimum use of auditory and visual channels.

(*b*) Acquisition of those skills that will enable the student to develop his potential for communication through all of the expressive modalities.

(*c*) Recognition of those areas of communication in which he functions effectively and those areas which limit effective communication.

(*d*) Independent use of these acquired receptive and expressive skills for maintenance and improvement of communication.

(*e*) Development of the confidence to utilize his acquired communicative skills, receptive and expressive, in situations with the normal hearing and/or deaf.

Audiological and speech evaluations were made at the beginning and end of the school year. Every student has speech therapy for at least 40 minutes a week. One 20 minute session each week is devoted to auditory training while the other session is devoted to voice, articulation, language, and general speech exercises. In a continuing effort to correlate speech and hearing services with instructional services, the department has taken steps to maintain close working relationships with the various departments of MSSD. Speech therapists are actively involved in the subject areas. They have worked with the English Department in preparing students for panel discussions and with the Drama department in preparing plays.

The initial involvement of the Counselor consisted of meeting the students both in groups and on an individual basis. Personal adjustment counseling has been identified as the primary responsibility of the Counselor. To better serve this end students are permitted not only to schedule time for counseling, but also to stop in when they have the free time and/or the need. The group meetings are, of course, regularly scheduled.

The Counselor administered an altered form (language) of the Mooney Problem Check List to the students involved in the group counseling sessions in September. The test was administered again in February to see if any changes in the number and type of problems were evident. The results have been partially analyzed and, in terms of number of problems, the mean decreased from 42.3 to 32.2. As well as reinforcing our impression that something is happening in these groups, the results of the Mooney have also proved useful in individual counseling, conferences, and staffings on particular students.

One of the areas of major emphasis at MSSD is a concerted effort to augment desirable change in the student body. At MSSD, the program is designed to maximize positive feelings of self-awareness, self-concept, self-development, and responsibility. A particularly crucial concern in an innovative program that relies heavily on self-evaluation is the determination of occurrence of change in affective behavior, and if noticeable, what direction it takes.

Consequently, the Division of Research, Curriculum Development and Evaluation, directed by Dr. Joseph Rosenstein, attempted to gather some feedback in the area of affective growth by soliciting responses from parents of MSSD students. A mailed questionnaire was selected as the means of soliciting the feedback information. The criteria used in the construction of the questionnaire were that the questions generally be non-leading and that the parents be allowed considerable latitude in terms of structuring their responses. The over-riding consideration on the criteria was that the indication of affective growth was to come solely from parents' observations.

The responses were very encouraging. Virtually all returned questionnaires have indicated overwhelmingly positive affective development in the MSSD students. The responses ranged from all-encompassing favorable comments to comments about specific areas of affective development. The following statements are a characteristic cross-section of these responses:

> "She has opened her mind and realized that there is much to learn if you wish to stand on your own two feet in life."
>
> ". . . happy with teachers . . . the more mature atmosphere is appreciated."
>
> "He's so much more relaxed (at MSSD)."
>
> "He is up and ready to go to school every morning with no urging."

The negative responses were concerned with the need for more structure, for more traditional techniques of education, and more stress on academics. All responses, positive and negative, provided valuable input for future planning.

Curriculum development is primarily the responsibility of the teaching staff, guided by the Coordinator of Curriculum. At MSSD curriculum is defined as the "totality of learning experiences planned for the students." Here I would like to quote from a paper on the "Policies of Curriculum Development at MSSD" written by Mr. James Kearney, Curriculum Coordinator. The selection gives a clear picture of our curriculum goals.

"Development of the MSSD curriculum will be characterized by the following general principles:

(1) Knowledge of the structure and processes of a subject will take precedence over memorization of facts and definitions.
(2) Strong emphasis will be given to development of higher order intellectual skills such as concept application, problem solving, and critical evaluation.
(3) It will be the obligation of all departments and all teachers to contribute to the development of the student's communication skills, both in the preparation of instructional materials and in their interaction with the students.
(4) All departments will be required to develop objectives in the affective domain: attitudes, values, interests, personal and social behavior, etc.
(5) Deliberate efforts will be made to develop interdisciplinary projects and materials.

(6) A learning model such as summarized in Bloom's *Taxonomy of Educational Objectives, I and II*, will be used as a guide for identifying the levels of difficulty and sequencing of objectives.

(7) Articulation of the curriculum will be achieved by explicitly stating the relationship of each objective to one or more objectives on the next higher level; i.e., specific behavioral objectives of an instructional package will be related to the terminal objectives of a course; terminal objectives of a course will be related to the department's general objectives; the department's objectives will be related to the goals of MSSD.

(8) Departmental objectives, course objectives, and specific behavioral objectives will be subject to change as time and experience dictate.

(9) Our curriculum format is the instructional package. Development of such packages will be a continuing obligation of the school until they are firmly established. Other approaches that may seem more promising will then be explored. (2)

The Division of Instructional Systems and Media is directed by Dr. Guy Watson. This division supplies the teachers with the visual materials and equipment they request for the instructional packages they are developing; it recommends strategies that best meet the teacher's objectives; and helps teachers and students become familiar with the operation of all visual equipment such as the video-tape recorder, overhead projectors, CAI programs, etc. The slide-tape presentation on the MSSD that will be shown at this convention was produced by this division.

The Division of Instruction is directed by Mr. Mervin Garretson, Principal. Other departments within the division are the Department of Staff Development and the Department of Off-Campus Study. The Department of Staff Development is responsible for all in-service workshops, the training and development of new staff members and generally providing opportunities for the professional growth of the staff.

The major thrust of the Department of Off-Campus Study is to provide vocational orientation and opportunities for training related to MSSD students' occupational objectives. To accomplish this, the department is working on a three-phase procedure that will provide the students with (1) orientation to the world of work, (2) pre-vocational preparation and (3) vocational training and placement of students in areas of their choice. This three-fold experience is given to all students even though their immediate goal after high school may be college.

To complete the picture of the Instructional Division let us move to the students, teachers, and basic philosophy of the Division. The school year began with a three-week orientation program so that MSSD students could familiarize themselves with modular scheduling and activities and facilitate the transition from a traditional to a more flexible program. This period also permitted preliminary evaluations of the students by the staff and allowed a general get-acquainted student-faculty interaction phase.

Following the orientation program, the master schedule for the first semester went into effect. The schedule was based on a 20-

minute module, with each "period" being some multiple of 20 minutes. During the year the schedule was changed three times to meet the needs of a developing program.

Under the present schedule, students and staff have donuts and coffee together from 9:00–9:20 a.m. At 9:20 classes begin and continue until 12:40 with a few running until 1:30. The course offerings during this time are English, Mathematics, Social Studies, Spanish, Science, Home Economics, Drama, Business Education, Speech, Art and Physical Education. The three computer-assisted instruction programs, one in basic mathematics, one in logic, and one in English grammar, are available on the computer terminals throughout the day.

In the afternoons the students are free to sign up for various activities and mini-courses. Examples of some of these activities are: National Theatre of the Deaf workshop, glass blowing, special projects connected with their morning subjects, field trips, driver's education, swimming, etc.

The basic philosophy of the Division of Instruction implies the right to dare, to experiment with the unknown potentialities of the deaf student, to assess the extent to which an unstructured and relatively uncontrolled learning situation will lead to mental and emotional stability and to explore whether such naturalness of the learning environment will effect a genuine and enduring balance of the human spirit.

Through a total integration of formal and incidental learning, the school hopes to approximate the spontaneous learning experiences of students with normal hearing. Characterized by comfortable and unrestricted communication methodology, MSSD seeks to provide in an atmosphere of open space and action:

(1) a spirit of naturalness among both faculty and students
(2) an educational program with a natural balance of the affective and cognitive which center on the deaf student
(3) an acceptance of the student as a person
(4) the acceptance of noise and movement as natural situations for youth rather than enforced order and control.

The school believes that the most socially useful learning in the modern world is process learning. During a recent White House Conference on Children, one working paper found that "ours is the first generation to have achieved the Socratic wisdom of knowing that we do not know the world in which our children will live." (*3*) Therefore the school essentially promotes the inquiry and problem-solving approach from which a student can learn how to learn about that which is unknown. Deaf students especially need to discipline their thinking in terms of alternatives and to recognize existing knowledge as imperfect and incomplete.

Among innovative considerations which continue to undergo discussion and change among both faculty and students are:

1. The concept of non-gradedness

MSSD places the emphasis on the individual student so that school ceases to be a "by-the-bell", "by-the-grade" affair. Education becomes the individual responsibility of the student and may be approached from the point of his own particular, unique needs, at his own pace, and in the developmental sequence which he eventually finds most suitable for his kind of learning. It is the teachers' responsibility to build continuity between the interests of the learner and the standards of excellence which transcend the immediate desires of the less mature.

2. FLEXIBLE SCHEDULING, INSTRUCTIONAL PACKAGE MODE

This innovative approach permits the slower student to continue at his level without holding back the quicker or more aggressive learners.

3. OPEN LEARNING AREAS

The avoidance of walled classrooms *per se* in the new school appears to be workable and effective. This aspect of the structure arises from an assumption that deaf students need to acquire ability to screen out visual distractions and develop concentration in a manner somewhat analagous to the sound and noise monitoring of the hearing student. Academic activity becomes workshop-oriented with small groups scattered in the various subject matter areas and in other open portions of the school.

4. LEARNING-CENTERED PHILOSOPHY

Under such a rationale, both teacher and student find it necessary to make certain adjustments. The students are beginning to realize that motivation can be an intrinsic part of the self-concept, and are acquiring a new sense of responsibility and direction as they move through the various instructional packages, school activities, and informal conversational give-and-take with one another and with members of the school staff. We have no precise formula for the kind of teacher we want at MSSD, but there are some recognizable qualities which seem to characterize the best teachers. "He will not be much of a talker, rather a listener; not much of an answerer, rather a questioner; not much of a tester, rather a rewarder. Not much of a restrictor, rather an opener. His work will consist largely of designing an environment in which high school students can learn how to ask questions, how to distinguish between relevant and irrelevant questions; how to invent methods of finding answers to those questions, how to develop the capacity to conduct inquiries with vigor, and to apply the results of their work to some vital aspect of their lives." (*4*)

5. EVALUATION

The evaluation of goal achievements has too long been a prerogative of the teacher alone. Many of them assume that successful achievement of goals by the student is teacher success while failure to achieve those goals is wholly student failure. As Silberman points out in his book *Crisis in the Classroom*, we need to "concentrate on how to make evaluation serve the ends of education, instead of being an end in itself." (*5*) Evaluation should be for the teachers a measure of their effectiveness in achieving their objectives; for the school, a test of soundness of the assumptions on which the curriculum is based; for the student an aid to his self-evaluation.

Probably the greatest problem we faced during the year was that of personal freedom. The staff wanted to be free and creative and wanted the students to feel that they also were "people" with a right to personal freedom. As you know, personal freedom is not something you can give to either student or staff; rather, you have to create an environment of trust with room for mistakes and testing of limits in which students and staff can learn to make themselves free. This is a slow and sometimes painful process.

Both staff and student body underwent attitudinal changes as a threefold departure from tradition emerged in the areas of curriculum, philosophy, and the physical structure of the school. Unaccustomed as our students were to the new flexibility, the open areas, options for use of unscheduled modules and other free choices, during the first few months many reacted with what might be characterized as "great abandon." The new concept of individual freedom and the relatively permissive atmosphere initially produced a somewhat heady environment for deaf students from more structured and adult-directed situations. Certainly there were moments during those early months when this undisciplined fluidity of student movement caused the teachers to experience a sense of trauma and for some, near panic.

Some of the staff members felt exposed and vulnerable. Many of the problems that can be hidden and controlled within a standard enclosed classroom had to be faced for the first time out in the open. (*6*) Insecurity aroused feelings of inferiority and some of the staff became overconcerned with themselves. Both staff and students struggled with the other side of the freedom coin: responsibility and accountability.

With the passage of time, a calculated restraint of authoritarian tendencies, and the belief that self-responsibility must be self-generating, the anticipated changes began to emerge. The apparent *laissez-faire* of the early period surrendered to an expected *savoir-faire* and the hoped-for sense of balance and direction is being reflected in a maturing and evolving student body.

Finally, MSSD endeavors to maintain a continual awareness of the deaf students' special need for unstructured or incidental learning. One of the provocative implications of the Equal Opportunities Survey was the amount of knowledge students gain in school from other students. (*7*) Perhaps we still think of the school too much in terms of teachers teaching and students learning and not enough as a place where young people do a great deal to and for each other. Such environmental richness may be largely intangible, difficult if not impossible to assess, and may emerge only in long-term behavioral changes.

A story perhaps best sums up our philosophy at MSSD. Picture a family living room with the father intent on reading his evening paper and his little son pestering father to play with him. Finally the father in desperation tears a piece out of the paper that has a large map of the world on it. He tears it up in a multitude of little pieces and hands it to his very small son saying: "Now take these pieces and put the world back together and do not bother me again until you have finished." The little boy spreads the pieces out on the floor and begins. In less than no time at all he has the world all together and brings it to his father. Needless to say, the father is astonished. "How did you get it done so fast?" "Well," says the little boy, "I noticed that there was a picture of a man on the back and I thought if I got the man back together the world would take care of itself." I think that is what we are about at MSSD: getting the man together; and leaving to his charge the task of creating a better world.

LIST OF REFERENCES

(1) Agreement between Gallaudet College and DHEW implementing Public Law 89-694, May 16, 1969.

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THE ORGANIZATION AND ADMINISTRATION OF EDUCATIONAL TELEVISION AND CLOSED-CIRCUIT TELEVISION IN SCHOOLS FOR THE DEAF

H. G. Royall, Jr., A.B., M.A., Assistant Superintendent, North Carolina School for the Deaf

In responding to the request of making a presentation to the convention about the organization and administration of educational television, I proceeded to do precisely what almost any other person would do in a similar situation: I reviewed the existing literature. Subsequently, I concluded that literature of this nature is not available because of the veritable lack of the use of educational television within schools for the deaf. I will not attempt to design a closed-circuit educational television system for you. Rather, I will give you ideas and suggestions as to what you may expect from such a program and the possible goals for which you should eventually strive.

This lack of real educational television application within schools for the deaf appears to stem from two prime factors. The first is a reluctance to originate commitment, and the second is a seemingly financial deprivation. Most of us recognize the obvious virtues attainable through the employment of educational television in schools for the deaf; however, we have assumed that our institutions are too little, too big, or somewhere in between. We then assume that we cannot initiate such a program. Either we are waiting for the appearance of more research within this field, or we presume that it is an expense with which we cannot become involved.

I am convinced that an additional factor which every administrator has thought of is the amount of time required to design a closed-circuit system, purchase the necessary equipment, and instigate a program of educational television which is functional. It is this attitude which has traditionally been in existence in schools for the deaf; it is this same attitude which should be eliminated. Any administrator who feels that he cannot function competently unless he is knowledgeable in every single aspect of his school is detrimental to the programs of his school. No one individual can possibly be a specialist in 20 different areas, and no one supervising teacher holds a degree in seven different academic areas. In the March, 1970 symposium on educational television, Lincoln, Nebraska, almost 90 percent of the people attending were educators of the deaf. They should have been television specialists.

Most administrators of schools for the deaf now employ what is currently termed a media specialist. These media specialists are primarily graduates of a media center workshop. Prior to their participation in these workshops they were, in almost all instances, teachers of the deaf. We have taken teachers of the deaf, exposed them to a six-week "crash" program of media, and we have then certified them as being competently knowledgeable in all areas of educational television. This is a grave error on our part inasmuch as a graduate from such a program cannot possibly have obtained the skills to do what is necessary in designing a facility, purchasing equipment, and laying the foundation for a solid program in educational television. Such a task is the responsibility of trained television specialists, not educators. The time to accept the fact that we educators of the deaf are not television experts is now imminent, and to adopt this attitude is the first step forward after the initial commitment. The second step is to hire the services of a qualified engineer. He should communicate with the media specialist who is in turn functioning as the liaison between the administrator and the engineer. Many states have trained television technicians and engineers who work as a part of the state's administration, and these same people will work with any school in designing a closed-circuit system and offering advice concerning the purchasing of proper equipment. These services can be obtained without design cost to the school agency. There are very few universities in the United States which do not have established educational television facilities—another source upon which we can call without cost to the particular school. The role of the media specialist is to make decisions concerning what is ultimately desired for that particular school. Such decisions will include namely: (1) what type of equipment is needed to initiate a program geared to our particular situation? (2) Should our equipment be portable or permanent? (3) Exactly how sophisticated do we desire our equipment to be? (4) Will our facilities be permanently black and white or should we make provisions for future installation of color? (5) Will our studio be permanent, or must we always rely on obtaining tapes of existing classroom conditions and activities occurring on the campus, in town, and on field trips? If a studio is not a corporate part of your plans, then portable equipment is mandatory. The above mentioned questions are obviously ones which only the administrators and media specialists of a given school can answer.

Because television equipment is expensive, very few of us can afford to begin work with a complete closed-circuit system and a fully equipped studio. It is apparent that a certain amount of growing and building on existing equipment must occur. If there is an initial purchase of a camera, a monitor, and a recorder, this must be preceded by a feasible plan which insures that the facilities purchased will not be replaced the following year by an incompatible piece of equipment. Television machinery is highly incompatible from brand name to brand name, and this is one facet of the program which needs consideration. For example, one cannot run a ½-inch Concord tape on a ½-inch Ampex recorder. Why then purchase a portable unit which will cost nearly $2,500 if it will not be compatible with your future television plans? It is financially sound to begin with good equipment as a foundation which can be expanded so that the final product will result in the program initially desired.

As one moves through the process of building a workable program with existing equipment, he will definitely become involved with the development of a closed-circuit system. At the North Carolina School for the Deaf, we have installed what is called a CATV (cable television) closed-circuit system. Our local cable television station brings 1 outlet to the school, and from that single outlet which transmits 13 stations, we amplify and distribute its signals through underground cables to some 200 existing outlets in the school. We have the ability to interrupt three of the low-band channels in order to incorporate the utilization of them within our school's closed-circuit system. CATV is only one of many functional antenna systems which can be used. The Tennessee School for the Deaf has a singular antenna tower which picks up regular television signals in the same manner that any home roof antenna would. Their facilities amplify and distribute these signals to the existing television sets within the school. In addition to this, they are also able to cut into the cable or the closed-circuit systems in order to vary the types of programs available for viewing.

Immediately following the initial purchase of equipment, it is essential to hire a television specialist who should initiate a training program designed to work with staff members and students in the utilization of this equipment to its fullest advantage. Much to my amazement, I have discovered that persons majoring in direction and production of radio, TV, and motion pictures and currently graduating from our colleges and universities have learned things other than how to shout "rollem", "take five", and "cut." These graduates know what operational television is about. They are highly skilled people trained to know the value and use of good television equipment. They have advanced far beyond the juvenile "play with TV" attitude. They are vitally aware of the tremendous educational impacts that television has, and they possess the knowledge with which to produce the same high quality, highly entertaining programs we are accustomed to on regular commercial television. Our teachers and students are not unenlightened. If we permit our initial programs to be instigated in a play atmosphere that soon becomes cut and dried, the entire concept of educational television can be hopelessly lost. Educational television should be a supplementary program, and in order for it to be a successful one, it must be entertaining, motivating, meaningful, and educationally sound.

It is the television producer/director who should insure that the equipment is used in the proper manner; however, it is a rare person who can do this in addition to bearing the responsibility of the maintenance of equipment which is inevitable; therefore, it will be necessary somewhere along the line for the school to hire a full-time technician. Many schools for the deaf already employ a hearing aid technician, and in some cases, these people are sufficiently knowledgeable about the mechanics of electronic repair so they can also function as the television technician. Educators are continuously participating in programs which keep them abreast of what is happening today. It is feasible then to assume that it may become necessary for the technician to update his knowledge of television electronics.

I have previously stated that we cannot expect educators of the deaf to be a combination of teacher, television producer/director, and technician specialist. After the above mentioned steps have been completed, one is faced with the necessity of *doing something* with television. This is why it is essential to procure the services of both a competent television producer/director and a technician. With these two people at one's disposal, the school now has the capability to operate a television system which is comparable with the regular commercial programming to which we are accustomed. In any given situation, teachers that utilize television equipment become entangled in the snare of taking pictures of daisies, buildings, and children. They are side-tracked to the point of forgetting what they were originally hired to do: *Teach.* The wise television producer/director will promote the involvement of staff members who are capable, flexible, and enthusiastic. He will have things organized so that the singular objective of the teachers will be simply to teach. This will not only insure that the genesis of the television production will have a highly successful prognosis, but it will also help instill in that teacher the assurance that making a television tape is no different from teaching in a classroom. The producer will now have a disciple to go out and spread the "word".

Most of you will agree that in the residential schools for the deaf, the vocational shops have been established because of the needs peculiar to that school. This same philosophy should be applied to one's existing television facilities. Why not turn the television producer/director into a vocational classroom teacher? He is capable of teaching the students how to operate television equipment, make props, do art work, write scripts, produce, direct, and act. Needless to say, as educators of the deaf we are aware of the value of television in relation to the development of language. We are also aware of the value of a television program in regard to our teacher-training programs. With the use of television, teachers-in-training have the opportunity to see what they have done; hence, a "sensitivity class" within itself, complete with self-criticism and self-improvement. It is a fact that a teacher, a student, or a teacher-in-training, given the opportunity to change the past by doing another tape and improving it, will jump at the chance. Communication, methods, planning, English—all will improve and new ideas will be retained for future use.

Very few of our college preparatory classes need two full years of vocational work in printing and/or in I. B. M., especially if they are to continue their academic careers. It is only logical to reason that these students will gain more benefit from being exposed to classes of television media. The scheduling of students into such classes will serve a dual purpose inasmuch as it takes man power to produce TV programs, and this is manpower. The equipment itself will dictate the limitations of the system; however, if one has flexible equipment, a specialist to operate it, students as man power, and the entire world as a stage, there are no limitations as to what can be done.

There is no reason that a school for the deaf cannot acquire a tremendous amount of free equipment. Our school wrote letters to almost every television station in North Carolina; consequently, we were able to obtain tripods, cameras, and multiplexers. Some pieces were not compatible or feasible, but others saved us thousands of dollars. With a film chain, a television station becomes flexible enough to put regular captioned films on television. We have virtually become an "N.C.S.D. Thursday night at the movies." With a captioning device one has enough flexibility to tape directly from commercial television, caption it, and hold it for later use. Thus through the use of this equipment, programs about drugs, sex, documentaries—all become captioned films. A permanent studio facility makes it possible to produce live interviews and programs of top quality. By utilizing three channels of a closed-circuit system and three recorders, one is able to produce three programs simultaneously. Such a need arises in a large school when one desires total involvement at all academic levels from pre-school through high school. These are merely a few suggestions as to the versatility of a television system within a school for the deaf. Much of the electronic equipment and technical design for a closed-circuit system can be found in Dr. William D. Jackson and Jack Goforth's book ***Suggestions and Guidelines for Development of Television Facilities in Schools for the Deaf*** (1968). This publication deals not only with classroom and campus systems, but also with regional systems to which we now have access. The Southern Regional Media Center for the Deaf in Knoxville, Tennessee has the facilities and personnel to copy a tape for any other school for the deaf which possesses currently existing equipment. The television facilities at the North Carolina School for the Deaf are not compatible with the television equipment here in Little Rock because we have 1-inch IVC 860 color recorders and this school has ½-inch Concord recorders; therefore, in order to make a tape exchange program possible, it was necessary for the Southern Regional Media Center to design a facility which could dub tapes produced at our school onto blank tapes from the Arkansas School which in turn makes it possible for things which we are doing to be shared with Arkansas, and vice versa.

All of my remarks have been made with a studio facility in mind. I am convinced that any school for the deaf that can afford to make the initial commitment to become involved with educational television should have eventual plans for a permanent studio and closed-circuit facility. Having the studio as a permanent facility does not limit one only to studio activities. The advantages of a portable unit are immeasurably valuable and were pointed out during the Symposium on Research and Utilization of Educational Media for Teaching the Deaf in Lincoln, Nebraska, March 1970. It would be inconceivable to take one of our IVC recorders, cameras, and audio equipment to a local high school football game or wrestling match, but we are flexible enough to record this via portable equipment and then incorporate it as part of a full-scale studio production.

With the aid of both our technicians and maintenance department which built a control booth, installed the lighting, built the backdrops, and wired the facility, we have converted a basement play area into a fairly sophisticated television studio which is functional. Next year we plan to move into a new academic building. We have been working on the design and construction of this building for nearly four years, and within this building we have planned a permanent studio. The cost of the temporary studio will be almost nil because nearly everything which has been installed in that studio will be moved to the permanent one. The new studio will be wired to 14 academic classrooms and will provide us the ability to originate programs from any of these academic vantage points, thus broadening the boundaries of the television studio itself.

I have previously stated that the North Carolina School for the Deaf has a CATV (cable television antenna) system. Morganton is a relatively small town, and the nearest commercial station is 65 miles away in Charlotte, North Carolina; the nearest educational television station is 125 miles away in Greensboro, North Carolina. The cable television company itself utilizes one low-band channel as a weather, temperature and time information station with background FM music. For us this is a complete waste of broadcast power; therefore, we are now in the process of trying to get a "hot-wire" from the NCSD-TV studio channeled into the local cable system in order that we might produce public service broadcasts from our school to the people in the Morganton area. NCSD-TV has the potential of becoming an area television station for those who are presently utilizing CATV. At present we have 620 children in our school; we are affiliated with Vocational Rehabilitation; and we have large numbers of alumni living in the area. Thus, our being located in Morganton makes us equally responsible to all. We can have interviews with local citizens, politicians, and educators, and we can provide services to the deaf which have never previously been provided on any other commercial or educational channel. Please remember that all programs originated from NCSD-TV will be either captioned or interpreted. It is obvious that this will expand our closed-circuit system from its present 200 outlets, serving students and staff, to the entire Morganton area.

In this paper I have provided you with several ideas as to what can be done with educational television on a closed-circuit basis. I have also related in some measure what the North Carolina School for the Deaf is actually doing with television. If only one thought were to remain with you, I would wish it to be that there are absolutely no limitations as to what can develop from the intelligent use of educational television within schools for the deaf. We at the North Carolina School are in the infant stages as far as television is concerned, and we believe that the things mentioned herein will be completely obsolete in five years. We intend to keep our educational television system moving forward at a pace which will insure this obsolescence. Up to now our investment has been less than $100,000 and I definitely feel you will find, as we did, that it is well worth the expense.

THE ORGANIZATION AND ADMINISTRATION OF PARENT EDUCATION AT THE CARVER SCHOOL FOR THE DEAF

Steve L. Mathis, III, M. Ed., Principal

INTRODUCTION

A program of guidance and counseling for parents of deaf children has been recognized by authorities in the profession as an important element of an effective educational program. The growing number of parent education programs in our schools attests to the increasing recognition of the role of parents in the wholesome development of their deaf child. The term "parent education" has been used broadly to describe a variety of activities involving parents. These have included parent institutes, information series in metropolitan areas, group meetings, correspondence courses, courses in manual communication, and individual counseling.

In the present study, the term *parent guidance* denotes a program to assist parents in understanding and modifying attitudes and feelings that result from having a deaf child. *Parent education* is an effort to help parents acquire knowledge of ways in which cooperative efforts between the home, the school, and resources in the community will provide optimum development of their child.

Carver School for the Deaf is a public day school of the Board of Education of Anne Arundel County, Maryland. The instructional program is designated to meet the needs of children with severe and profound hearing loss from the age of 3½ through the sixth grade. A fleet of buses daily transport children to the school from throughout the county. The modern physical plant, situated on a five-acre campus, includes self-contained classrooms, a library, multi-purpose room with cafeteria, speech therapy room, and offices. Carver is a demonstration school of the National Committee on Teacher Education and Professional Standards of the N.E.A. As such, it annually plays host to hundreds of visitors from this country and abroad. The school also serves as a laboratory for the Graduate School of Gallaudet College, Washington, D. C., whereby graduate students pursue supervised observation, teacher aiding, and practice teaching.

The philosophy of Carver School for the Deaf centers upon the development of the *whole* child. It recognizes the significant contributions which professionals and agencies in the community make in the growth and development of deaf children and seeks to utilize these resources in overall educational planning. The proximity of parents to the school enables a program of guidance and education that not only seeks to meet parents' needs, but encourages their involvement and active participation in the total life of the school. An "open door" policy permits parents to visit and observe instruction in the classrooms at any time without prior appointment. Individual parent-teacher conferences by appointment take place at frequent intervals throughout the year.

GOALS AND PROCEDURES

The specific goals for the parent guidance and education program are: create a wholesome acceptance of the child's disability; promote an understanding of the many factors involved in physical, mental, emotional, and social development of the child; provide an extensive knowledge of the instructional program offered by the school; demonstrate special techniques employed in meeting the particular needs of the child; acquaint parents with services offered by professionals, organizations, and agencies in the community; provide guidance in the development of realistic goals for the future adjustment and employment of the child.

In seeking to achieve these goals, the following procedures are employed. *Group therapy:* open discussion relating to the psychological acceptance of physical disabilities, problems incurred by parents, and subjects of mutual concern that emerge during discussions. *Instruction:* an understanding of the nature and needs of deaf children. *Demonstration:* special techniques, methods, materials, and equipment employed in meeting the needs of the child. *Observation:* films and direct classroom observation to stimulate parents' efforts to saturate a learning environment in the home. *Discussion:* review of previously distributed literature pertaining to various aspects of the child's development, meetings with deaf adults, and visitations to their homes, organizations, and places of employment. *Counseling:* private conferences to discuss individual problems and needs.

The program follows a three-stage sequence of guidance, instruction, and observation. Groups meet for two-hour sessions each week for a period of fifteen weeks. These sessions are supplemented by a further two-hour session of mothers once a week during the school day. An important element in the program is determining the readiness of parents to move from one stage to the next.

The first stage of the program concerns itself entirely with parent attitudes and feelings. Under the guidance of a competent group leader in a non-threatening atmosphere, parents discuss openly and frankly their reactions to having a deaf child, attitudes that have been formed by themselves and others, marital and family difficulties arising from the child's disability, inadequacy to communicate and discipline the child, attitudes toward professionals and agencies, and related problems.

The second stage involves lectures, discussions, films, literature, demonstrations of methods and techniques, and observation of instruction. The nature and needs of deaf children and the many factors involved in their educational, social, and emotional development are crystalized. Recognized authorities in the profession and in community agencies serve as consultants in an effort to both enlighten and involve parents in the process of the child's total development.

The third stage seeks to broaden the perspectives of parents relative to the future adjustment and occupation of the child by bringing them into direct contact with adult deaf persons. Initially, deaf persons representing varied backgrounds, occupations, and educational attainments meet with parent groups for open discussion and questions. These introductions are followed by visitations to homes, clubs, churches, organizations, and places of employment.

STAGE 1—GUIDANCE

When parents discover their child is deaf, their initial reaction is one of disbelief, confusion, and profound grief. As a result of this reaction, parents have so many questions, doubts, fears, and conflicts that they cannot concern themselves with the long range plan of education. Our experience has been that parents are unable to discuss and participate in planning for their child until they have had opportunity to deal with the shock of discovering their child's deafness, express their feelings, and receive positive support in developing wholesome and realistic attitudes. Indeed, until their feelings are brought to the surface and conflicts are resolved, parents are unready to receive or absorb facts and information concerning their child.

The significance of parent attitudes and feelings becomes all the more apparent when consideration is given to their influence upon the child's emotional development. Numerous studies emphasize that the most important factor in determining the child's attitude toward his deafness is the attitude of his parents. Moreover, the extent to which any disability handicaps an individual depends to an important degree on the way his family feels about it. Unless a child feels secure in his environment, he is likely to develop emotional difficulties which can be as handicapping as the physical disability.

Group therapy has proven the most effective approach in dealing with feelings. The group not only gives individual parents emotional support, but a greater freedom to recognize common experiences and similar needs and to express their attitudes, feelings, and beliefs. Parents soon begin to educate each other and are generally more receptive to information, advice, and counseling coming from people who are sharing the same plight and seeking a common solution. The most comfortable feeling parents experience is that they are not alone.

During the five years our program of parent guidance has been offered, we find that parents generally go through eight stages of change. It is important to understand the attitudes and feelings that emerge at each stage and how the counselor can intervene to modify existing attitudes and behaviors.

1. Why did this happen to me? The feeling of guilt and grief at giving birth to a child with deafness, or confronting the traumatic experience of having a normal child acquire deafness from illness or accident, reflects the initial reaction of the parent. They generally regard the child as a blow to self-esteem, a punishment from above, and a trial to be bravely borne.

2. Who is to blame? Few parents are content until some assessment of blame for the child's disability has been definitely placed. Some ascribe the child's deafness to a doctor's negligence or incompetence. Others see it as a punishment for a youthful indiscretion of the mother. Still others suspect a genetic problem that was previously unrevealed to them. When the specific medical reason for the child's deafness is established, the feelings of guilt begin to subside.

3. What will people say? The ignorance of parents of what deafness involves and their inability to communicate with their child makes the problem of explaining his deafness to others extremely complex. The interaction strain, that is, embarrassment from uncertainty about how to interact with a deaf child and fear of saying or doing the wrong thing, generally occasions exaggerated fears of parents in revealing the child's deafness or permitting general interaction outside the home.

4. Worry—worry—worry! Feelings of guilt, remorse, confusion, and helplessness at this stage of non-acceptance of the child's disability may lead parents to two extremes: they may regard the deafness as a temporary state for which there is an eventual cure; or they may do everything for him to compensate for his deprivation, including an overwhelming protective "love" and shielding him from contact with other children. Other members of the family may be ignored as the child becomes the main focus of attention.

5. Those professional people. Whether voluntarily or enticed by family or friends, parents soon find themselves in the maze of consulting professionals—doctors, otologists, hearing and speech clinicians, and a variety of other specialists. Filled with doubt and suspicion, they soon discover that few professionals give the same diagnosis, most findings are marked "confidential", and more often than not parents are excluded from decision-making concerning their child. The parent gets the feeling that much is being said and done behind his back, decisions are made without his active participation, and he is placed in the position of a child who has been told what to do without having a say in the telling or doing. Consequently, professional people are generally regarded with suspicion and mistrust.

6. Search for "The Miracle." Even after competent medical advice has settled the question of the permanence of the child's deafness, non-acceptance by the parents and the desire to recreate the child to meet their standards and expectations leads them on a search for a "cure". This includes faith healing, airplane spinning, spurious medication, herb concoctions, and attempts at ear surgery. The extremities to which parents go and the length of this stage

in the development of attitudes contribute immeasurably to the direction which their actions at the next stage will take.

7. What do we do? Still seeing only deafness and not the child, and having been defeated in attempts to change his physical makeup, parents arrive at the critical stage where decisions concerning the future must be made. It is at this point that the counselor can intervene to change attitudes and behaviors of the parents. Through positive reinforcement of attitudes and feelings expressed, efforts are made to assist the parents in removing traces of guilt and through knowledge that will come through parent education, to liberate themselves from the feelings of inadequacy to cope with the needs of the child.

8. A positive program of action. Through the succeeding stages of the parent education program, it is expected that parents will acquire information that will enable them to perceive their child through new eyes. With an understanding of techniques employed in opening the world of language to him, a knowledge of community resources and the role of the professionals in the child's total development, appropriate educational placement, and long-range planning, it is anticipated that parents will develop wholesome acceptance of their deaf child rather than resignation, and readily respond to the challenge which his development presents.

STAGE 2—EDUCATION

The development of wholesome attitudes toward the deaf child on the part of his parents precedes sharing with them educational planning for the child. But even proper attitudes do not alleviate parents' concerns regarding various aspects of his development. Questions continuously emerge relative to the child's intelligence, whether he will learn to speak, appropriate methods of communication, school placement, potential for future adjustment and independence, and numerous inquiries.

The second stage of the parent program seeks to provide parents with information they seek in the long-range educational planning for their deaf child. We find that the type of data sought may be summed up in five categories: medical and audiological, educational, social and emotional, vocational, and organizational. In endeavoring to meet stated needs, we avoid an over-structured approach which would prevent the discussion-type climate which parents have experienced in the guidance stage. The greater freedom the parent has to express himself during all phases of the program, the more relevant and meaningful the program becomes. The elements developed in the second stage include:

Instruction

The services of professional personnel are utilized in bringing parents in direct contact with persons who are recognized authorities in specific areas and who therefore are in a position to provide the facts and information parents seek. A consultant gives a thirty minute talk on the previously announced topic of the session. Parents then raise questions and enter discussions on the subject being considered.

Demonstration

In an effort to familiarize parents with special methods, techniques, materials, and equipment used in teaching deaf children, various demonstrations are given. Proper use and care of hearing aids, communication with the child, interaction of the child with hearing peers, and related subjects assist parents in saturating language in the home.

Observation

Through films and direct classroom observation, parents are enabled to note the manner in which deaf children interact in the classroom. The fluent communication which takes place provides the parents with greater understanding concerning communication in the home. Observations further provide parents with a better appreciation of the child's intellectual potential, the type of educational program being provided, and the competencies of those with whom the child learns.

Discussion

Previously distributed literature on various aspects of the development of deaf children is openly discussed. Diverse philosophies on the educational approaches and planning are considered, unanswered questions are further ventilated, and new topics for the group's consideration are proposed. Parents discover that the growth and maturation of children present new problems. Accordingly, parent education must be considered as a long-range program to meet developmental needs.

STAGE 3—VISITATIONS

In an effort to broaden the perspective of parents concerning their child's future adjustment and independence as an adult, stage three provides opportunity for direct contact with adult deaf persons. The persons selected as models represent varied backgrounds, educational attainments, and occupational status. Effective rapport is established by having individuals meet with parents at a regularly scheduled group session. The person acquaints the group with various aspects of his life, the manner in which he has adjusted in a hearing world, his family, type of employment, and degree of interaction with both deaf and hearing persons. Following several sessions with different models, parents are invited to make visitations where they may see from firsthand experience how an adult deaf person makes a place for himself in his community.

Visitations are made to the homes of the models, where opportunity is given to meet and talk with members of the model's family. Small groups of parents then make scheduled visits to churches where worship services are conducted for the deaf; to events scheduled by organizations of the deaf; and observe the model at work at his place of employment. Friendships are established and further invitations to parents from individual models are anticipated.

It should be noted that stage three implies a philosophy that is implicit throughout the parent program: we seek to assist the parent in helping the deaf child to develop with dignity as a deaf person. As the parent accepts the child's deafness, the child will accept himself. He will then be guided for future adjustment as a deaf adult in a hearing world. The parents' knowledge of the wholesome adjustment of adult deaf will give them greater security that the child, despite his deafness, will be able to live a happy, wholesome, and productive life.

SUMMARY

Perhaps the major difficulty in our parent education program has been the absence of adequate instruments for objective evaluation. The problem of measurement is determining the extent to which changes in parent attitudes are being translated into improved methods of development of children in school and at home. Our examination of existing literature suggests that no satisfactory tests of these factors are currently in existence. We are now in the process of further experimentation with a measuring instrument we have devised with the hope that it may eventually enable us to determine through objective appraisal the significance of our parent program in the total development of deaf children.

Our program has been based upon great faith in parents. Their response to date has not only justified this faith, but has enabled progress of their children that is inspiring to behold. Hopefully, the day is past when educational planning for deaf children will exclude parent involvement and participation. It is our experience that there is no greater service that can be provided to deaf children than a program of guidance and education for their parents.

Contributed papers (10:30 a.m.–4 p.m.) Parnell Hall Auditorium

Chairman: Dr. William N. Craig, Superintendent, Western Pennsylvania School for the Deaf.

10:30 a.m. "*When Learning Becomes Creative*". Marilyn M. Williams, North Carolina School for the Deaf, Morganton.

11:15 a.m. "*Some Observations on the Education and Rehabilitation of Black Deaf Persons*". Frank G. Bowe, Jr., Research Assistant, Sensory Study Section, Social and Rehabilitation Service, U.S. Department of Health, Education, and Welfare.

1:30 p.m. "*Career Development of Deaf Young People*". Dr. Dave Lacey and Panel, National Technical Institute for the Deaf.

"*Practical Information on Career Orientation*". Walter Eugene Hines, Iowa School for the Deaf.

"*The Development and Implementation of a Career Development Program—Its Implications for Deaf Young People and Teachers*". Colin E. Tisshaw, principal, The Mackay Center for Deaf and Crippled Children, Montreal, Canada.

WHEN LEARNING BECOMES CREATIVE

Mrs. Marilyn M. Williams, M.A., The North Carolina School for the Deaf

When one permits himself to become involved with the business of education, he automatically exposes himself to a whirlwind of argument concerning the needs of the students, the purposes of education, and the merits of numerous teaching practices. As educators of the deaf, we are especially aware of the veritable wars waged on the effectiveness of the oral method, the manual method, and the method of total communication. We are constantly striving to endow our educational charges with the ability to perform and be accepted on a level equal to their hearing peers. Today's educational systems lean toward individualized instruction and creativity. Because of the nature of the deaf student's handicap, some educators of the deaf seem to feel that along with his auditory impairment, his sense of creativity in expression must also be restricted, and thus, he can very seldom perform creatively on an equal basis with the hearing student. The purpose of this paper is to present, in part, a program of creative writing and literature and the effectiveness of this program which is currently being taught at the high school level of the North Carolina School for the Deaf. In evaluating the importance of any educational program, the following criteria are necessary: the need for the program; the purpose of the program; the methods whereby the program is put into effect; and the results brought about by the program. The creative writing course at the North Carolina School will be discussed in relation to these four principles.

As educators, most of us agree that our task is to provide a means whereby the student obtains the ability to think, to analyze, to interpret, and to reason. There is little doubt that we should strive to endow our students with the ability to express ideas through written composition, and as educators of the deaf, we definitely are in agreement that our students desire the ability to read, to comprehend, and to write on a level equal to their hearing peers. Having defined these as our basic needs, we proceeded toward identifying the purposes of the creative writing course so that it would, in so much as possible, accommodate the needs of the students and at the same time promote individualized teaching situations that could produce creativity for both the student and the instructor. We felt it necessary to produce a stimulating atmosphere in which the student can feel self-confident enough to express his personal ideas about a given subject or idea. With guidance, the student learns the art of supporting his personal views on a given subject by using specific examples as a basis for his argumentation. It is expedient that the student have available to him examples of both good and bad literature so that he learns not only to distinguish between the two, but also to know why it is good or bad, and hopefully, to pattern his own writing after the good. Before originality can be produced, it is necessary to provide the student with ample varied reading material, thus stimulating the student's interest in reading and at the same time increasing his comprehension and word power. It is the firm conviction of this writer that reading and writing cannot be separated, and that the key to creativity is variety. It is mandatory that in a program such as this, the teacher should be a guiding force rather than a dictating one. It is obvious that students benefit from reading the classics, but it is also obvious that modern literature is equally educationally beneficial, and to force a student to become frustrated and foundered on a hardnosed classical diet is to kill both originality and vocabulary growth.

Creativity, in any form, suffers the pangs of labor. The student will become aware of this and appreciate the end results if he is provided with a stimulus and the *time* to write with a purpose rather than to be subjected to writing as a "busy work" assignment.

Even a written assignment for something as small as the seventeen syllable Haiku cannot be accomplished in one given class period. Three fourths of all writing is thinking, jotting, and exchanging ideas with peers. If the instructor cannot accept this fact or cannot tolerate the impression that the class is frittering time away, then there is little hope of anything original ever being born in that classroom. It is highly feasible that for a boy to describe the bark of a tree he will first need to leave the hallowed halls of the classroom and wander outside to rub his hand over the trunk of a tree. To appreciate the lessons found in Edgar Lee Masters' *Spoon River Anthology* it would seem appropriate to devote some class time to doing tombstone rubbings or simply to sitting on a grave to meditate or to write whatever comes to mind. To write a "graveyard poem" in class time spent in a cemetery seems much more logical than to write it in a warm bedroom after supper sometime between algebra and history. For the teacher who dares to be innovative in approach, the need for discipline is nil, and the degree of creativity is close to one hundred percent.

If the end result of this program is to have a student who can express his ideas through original compositions, then it is most definitely a task of the instructor to teach by emphasizing the capabilities of the student rather than placing emphasis on his limitations. It has been the observation of this writer that one cannot simply go out and become creative. As teachers of the deaf, particularly as English teachers of the deaf, we tend to overlook the thought expressed by the child and prey on the structure he used to convey the idea. Nothing is more demoralizing and less conducive to production. Granted, there are some grammatical structures which must be straightened out on the spot; however, if the student is constantly exposed to and in contact with a wealth of model compositions and excerpts from literature that "say it correctly," he eventually will begin to imitate the correct structures in his own writing. It is of utmost importance then for the instructor to provide an atmosphere which promotes learning through constructive criticism so that the young writer learns to improve his own deficiencies by continual application of the precepts learned from the models to his own compositions.

Originality is stimulating and fun for the high school age writer, but it has little value if some means of discipline and knowledge of form is not at the basis of it. Therefore, in a creative writing and literature course such as ours, there must be the purpose of providing the student with the opportunity to write both creatively and technically, thus presenting him with the basic writing skills which will be required of him at the college level. We also feel that a prime purpose of our program is to show that many of the modern world and personal problems with which students are confronted are the same themes expressed in the writings of great authors from Chaucer to present day. Thus, in understanding characters from literature, they may better understand themselves.

Once one has defined his needs and laid down his purposes, he may philosophically shrug his shoulders and mutter "now what?" It is one thing to define and prescribe; it is quite another thing to put theories into practice. Having worked with writing on various age and ability levels, this writer feels that the following approach is perhaps less complicated than some other possible avenues. Realizing that all teaching and learning situations are different, we offer two key words which will invariably work under any condition—*flexibility* and *follow-up*. By striving toward the flexible, we are able to take advantage of many personal experiences which aid in writing but which cannot always be scheduled on a calendar. For example, a class can always study the descriptive paragraph, but it cannot get the mood, the feel, the taste, or the smell of sleet on a bright June day. The instructor may plan to concentrate on descriptive paragraphs in June, but he should use the bleak, raw January day as an introduction to live experience which can be so effectively utilized in a later descriptive composition. By recalling in June something that was experienced and jotted down in a personal journal in January, the student benefits from both the flexibility of his schedule and the follow-up or reinforcement of it.

The framework for any creative writing and literature course must be structured around the ability of the student to differentiate between the connotative and the denotative approaches to writing. It is quite possible that such a lesson will extend over an entire week and it is relatively easy to correlate this concept into other subject areas so that the principle becomes reinforced. The principle that we need to understand is that many words have two kinds of meanings. One meaning stems from our using it simply to name an object (cat), a characteristic (four-legged), or an action (runs). This meaning is *denotative* and can be obtained from a dictionary. The other meaning of a word, the *connotative* meaning, causes us to feel or experience something. The word "thin" does not usually call a lucid picture, texture, or emotion to mind, but the words "slender," "willowy," "bony," and "skinny" leave definite impressions on the minds of the beholders. These impressions are connotative through implication. Beginning such a lesson, the instructor needs to use such model compositions as excerpts from Steinbeck's *The Pearl*, or from H. G. Wells' *The History of Mr. Polly*. The students should pick out examples of connotative vocabulary used by such authors and work with those sentences by changing them so that they become denotative and no longer hold their original descriptive, connotative power and beauty. From this first simple step, the instructor should move to very brief student compositions that require the writer to be connotative. Overlook some of the grammatical slaughter and applaud the achievement in connotation. As a follow-up of such an assignment, the instructor can reinforce these principles through a study of poetry or a short story such as Jack London's *To Build A Fire* which is an excellent example of a mood and setting of death and fear created through the use of connotative words.

In a paper such as this, it is impossible to relate each step taken in organizing and effecting our program; however, it is appropriate to mention here that we employ the use of a literature text coupled with the use of a writing text suitable to the individual age and grade level. Each of these basic texts is complemented by a variety of supplementary materials. Using these as the springboard for our program, we have established the following procedure. The program is set up to begin at the eighth grade level and proceed to the twelfth grade, with each grade level progressing from the basic fundamentals of writing and literature to the more difficult concepts. We begin by working primarily with words, then sentences, then paragraphs, so that finally on the senior level we strive toward composing a short story. With the introduction of each new concept we make available to the students model compositions which illustrate the concept being taught. We then study selections from literature which reinforce the knowledge gained from the models. The next step is to assign original compositions that require the students to utilize the concepts studied. The final step in the method of presentation is to evaluate the creative efforts constructively by both the students themselves and the instructor. Periodically we take time to review the original compositions which are kept in folders so that each student is able to see his own progress in the mechanics of writing as well as progress in thought patterns and depth of thought. We deal not only with creative concepts but we also teach the technicalities of the various styles of form writing such as the essay, the poem, the play, the short story, and the critique. We begin by familiarizing the student with technical writing jargon and structure of the given style. This is followed by locating the concepts taught in an actual publication and then asking the student to create an original composition in a specified style.

We strive continuously to emphasize the need to express a thought in the most clear, precise, and direct manner possible. It is also our constant objective to guide the class in discussions concerning their original compositions, writing techniques, literature, or philosophy so that the student has the opportunity to become self-confident enough to express his own ideas and at the same time learn from his peers. Discussion promotes thinking and reasoning; therefore, one main premise of the program is to instill the philosophy that there is not always a right or wrong answer and that interpretation of a poem is, to a certain degree, personal. Programming a student to respond on command to preconceived questions is one of the greatest educational injustices we can commit. Yet this crime is being committed everyday in the classroom.

Many articles have been published which discuss various educational programs, some conventional and some innovative. But the real test of any program lies in the results gained from it. At the North Carolina School, we can see several favorable results, the most important being the psychological results. Too often we teachers of the deaf tend to teach down to our students. Realizing that the deaf student lacks a working vocabulary, we often try to build his vocabulary by giving him reading material which matches his word skills. Most of the time the subject matter and the format of the material insult the intelligence and deflate the morale of the student. As we planned our program, we worked on the premise that if we offered challenging material from a textbook used by the equivalent hearing peer of that grade level, the challenge would stimulate vocabulary growth rather than frustrate or defeat the student. We are currently using the *Themes and Writers* literature series published by the Webster McGraw-Hill Company. We have found that the students enjoy the material in these texts and that they have responded in the way we had anticipated. We have found that this program has definitely established a wider range of reading interest in the students and that their reading abilities and word comprehension have improved. We have also been rewarded by the improvement in the sentence structure of these students when they write, and equally important, we find they are communicating with the instructor and themselves by imitating sentence patterns similar to those which they find in their texts. Possibly the most tangible improvement we see is the effort these students make at composing a poem or essay or short story even when they are not assigned one to write. When a student comes to a teacher and asks to borrow a volume of poetry or short stories for pleasure reading, that is a result. When a student comments in class about the theme of a movie he saw during the previous weekend, that is a result. When some quirk of fate occurs in the classroom and a student spontaneously remarks that the incident was "ironical," that is a result.

At the North Carolina School, we have found our program of creative writing and literature stimulating, rewarding, backbreaking, and fun. Creative writing is a well-planned, organized program. One does not walk into a classroom and decide to do some creative writing that day because "we haven't done that sort of thing lately."

Extensive planning is necessary to insure sequential experiences rather than piecemeal assignments. Initially, there will be resistance based primarily on departure from the conventional. Such opposition will disappear when the results of such a totally integrated program of learning and creativity begin to manifest themselves in all areas of the students' work. Given the tools with which to work, which is a requirement also of the hearing child, the deaf student will demonstrate that creativity does not hinge exclusively upon the sense of hearing.

SOME OBSERVATIONS ON THE EDUCATION AND REHABILITATION OF BLACK DEAF PERSONS

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A black deaf man or woman in today's society is likely to be grossly under-educated, severely under employed and largely isolated from the world around him.

That is the picture that emerges from an intensive survey of the literature I conducted last summer. Actually, I stumbled upon this disheartening story quite by accident. As a newly-employed Research Assistant to the Social and Rehabilitation Service of HEW, I was required to familiarize myself with all SRS-supported research into deafness over the past few decades.

Somewhere along the line, I noticed how striking a contrast appeared between the mass of publicity and research devoted to the problems of black hearing persons and the miniscule amount of data on blacks who were deaf. This impression was subsequently reinforced in conversations with leaders in the field of deafness: almost to a man, they knew little about the black deaf population and little about potential sources of such information.

At this point, I decided to undertake an exhaustive survey of the literature in an attempt to document exactly what was known about this population segment. My findings will be reported here today, although time restrictions will require some abbreviation in the presentation. I will begin with a brief description of the limitations of the data, proceed to a discussion of educational and rehabilitation indices of this group, and finally raise some questions for further research.

At times throughout the paper, the term "nonwhite" will be used instead of "black" to indicate that other minority groups than Negroes may be included in the data.

The figures reported here emanate largely but not exclusively from three SRS-funded projects. Schein's 1963 Metropolitan Washington, D.C., study (*1*) contains information on 187 nonwhite deaf persons, representing 14 percent of the total sample. Lunde and Bigman, in their 1959 National Survey, (*2*) found 344 nonwhite deaf persons, of whom 310 were black. The 1967 Baltimore study of Furfey and Harte (*3*) reports on 35 Negroes and 2 American Indians. These samples are somewhat small and in some cases may not be representative of the national black deaf population.

PREVALENCE

How many persons in the United States today are both black and deaf? The question of prevalence of deafness among the Negro population has a 140-year history. The U.S. Bureau of the Census attempted to enumerate deaf persons for 100 years (1830–1930). They consistently reported that the prevalence rate of deafness among blacks was lower than that among whites. Other studies: Beasley, (*4*) *Georgia's Deaf*, (*5*) Lunde and Bigman, (*2*) Post, (*6*) Schein, (*1*) Tenney and Edwards (*7*) have supported this contention, although for different reasons.

Schein and Ries (*8*) have summarized three possible explanations: constitutional, socio-economic and methodologic. The constitutional explanation centers around hypothesized differences in genetic make-up between blacks and whites. (*6*, *7*, *9*) The socio-economic explanation suggests that inferior medical care presumed given to the black population might result in black persons dying of diseases which "merely" deafen white persons. The final explanation, which is methodologic in nature, assumes that the black deaf population has been consistently undernumerated by census takers. A statistical estimation of the total prevalence, based on a ratio of approximately one profoundly deaf-born person per 1,000 in the general population, would be that there are slightly less than 22.000 black deaf persons in the country today. The current National Census of the Deaf should provide further information on this question.

EDUCATION

Black deaf children are often severely under-educated, markedly in excess of the under-education of white deaf children. Lunde and Bigman, (*2*) for example, discovered that the nonwhite deaf persons in their sample were twice as likely as the white deaf to have eight or fewer years of school attendance. Furfey and Harte (*3*) found that twice as high a proportion of white deaf persons as black deaf had been graduated from a school for the deaf or one for the hearing. Schein (*1*) suggests that approximately five times as many white deaf, proportionally, as nonwhite deaf in Washington, D.C., receive any college education. Data on college attendance from Schein (*1*) and from Lunde and Bigman (*2*) appear in Table 1.

Under-education, of course, is a function of more than the number of years of school attendance. Another factor we must consider, especially with respect to blacks no longer in school, is that of segregation in inferior schools for the Negro deaf. The Babbidge Report (*10*) has this to say on the question of separate residential institutions for deaf children (p. 28):

> In 1949, according to the *American Annals of the Deaf*, separate residential schools were maintained for white and Negro deaf children in 13 states; in 1963, this total had dropped to 8. In 6 of these 8 states, the combined total of deaf children enrolled in less than most educators consider necessary to sustain a school program of 12 grades. It is thus reasonable to conclude that the continued violation of a generally accepted principle and established public policy results not only in an injustice to the Negro deaf, but also in residential school programs for both white and Negro deaf children that are unnecessarily inferior. It was noted that the physical plants of the schools for the Negro deaf visited were markedly inferior to those of the schools for white deaf children.

TABLE 1.—PERCENTAGES OF DEAF RESPONDENTS REPORTING ANY COLLEGE, BY SURVEY, RACE AND SEX: SCHEIN (1) AND LUNDE AND BIGMAN (2)

Race and sex	Survey	
	Schein	Lunde and Bigman
Whites		
Male	37.5	9.8
Female	41.0	9.5
Nonwhites	34.0	10.1
Male	7.0	1.2
Female	9.0	2.4
	5.0	0.0

Fortunately, according to the 1971 *Directory of Services for the Deaf in the United States*, all of the states which previously featured separate schools for white and Negro deaf children have now desegregated their schools at least nominally.

REHABILITATION

With respect to rehabilitation, I wish to consider four general areas of discussion: employment, standard of living, case-finding and communication skills.

Severe under-education appears to be a major factor in the gross under-employment and high unemployment found among many black deaf persons. Racial discrimination may also be involved. According to Schein's figures (*1*) on the deaf adults of Washington, D.C., who were in the labor force, we can make these observations: 1 in 5 white deaf persons occupies a professional-technical position; by contrast, fewer than 1 in 50 nonwhite deaf persons do.

Half the white deaf women are found in clerical-sales positions; only 1 in 25 nonwhite deaf women holds such a position.

Schein (*1*) also found that the unemployment rate for nonwhite deaf men in Washington, D.C., was almost four times the rate for white deaf men. Regarding women, only ten per cent of the white deaf women were unemployed, but almost half the nonwhite deaf women were (see Table 2, taken from Schein's (*1*) Table VI:1).

We might expect that the combination of under education and under-employment would result in a lower standard of living among the black deaf than is the case among the white deaf, and such appears to be the case.

Furfey and Harte (*3*) noted that "poverty was the rule" among the nonwhite deaf persons in their Baltimore study. Of these persons, 41 percent were classified as being below average in economic status, as opposed to 14 percent of the white deaf in the study. Three times as many nonwhite deaf as white deaf lived in substandard housing. Three times as high a percentage of Schein's (*1*) nonwhite deaf respondents as white deaf were lodgers, rather than homeowners, and more than twice as high a proportion lived with parents or family.

TABLE 2.—PERCENT DISTRIBUTION OF DEAF PERSONS IN THE LABOR FORCE BY PRINCIPAL OCCUPATION, SEX AND COLOR: METROPOLITAN WASHINGTON, D.C. (SCHEIN (1) TABLE VI:1)

Occupational category	White		Nonwhite	
	Male (N=418)	Female (N=242)	Male (N=83)	Female (N=51)
Professional and technical	21.5	19.4	1.2	2.0
Managers, officials, owner	3.4	(1)	2.4	(2)
Clerical and sales	11.0	48.3	4.8	3.9
Craftsmen, repairmen, and foremen	48.8	14.0	15.7	2.0
Operatives, apprentices and related workers	5.3	5.8	18.1	31.4
Service workers	1.9	2.5	19.3	11.8
Laborers	3.8	(1)	21.7	7.8
Domestics	(2)	(1)	(2)	9.8
Unemployed	4.3	7.4	16.9	41.2

[1] Less than 1 percent.
[2] None appeared in sample.

The median income of the white deaf men in Schein's study (Table 3) was $6,473, which contrasts with $2,611 for the nonwhite deaf men. The white deaf women in this survey reported a median income of $3,542, while the nonwhite deaf females had a median of $990.

Case-finding is an extremely difficult problem not only for rehabilitation but also for education. Furfey and Harte (*3*) have suggested that nonwhite deaf persons are generally outside the mainstream of deaf life, as well as cut off from the hearing community. In many cases, clubs for the deaf either explicitly exclude blacks from membership or the members act in such a manner as to make a potential black deaf member feel unwanted and uncomfortable. Although my evidence is admittedly subjective, based as it is on conversations with leaders in various deaf communities, discrimination within the deaf subculture seems to be a fact of life.

TABLE 3.—MEDIAN EARNINGS REPORTED BY DEAF RESPONDENTS, BY SURVEY, RACE AND SEX: SCHEIN (1) AND LUNDE AND BIGMAN (2)

Race and sex	Survey	
	Schein	Lunde and Bigman
Whites	$5,075	$2,500–3,500
Male	6,473	3,000–3,999
Female	3,542	2,000–2,999
Nonwhites	1,801	1,500–2,500
Male	2,611	2,000–2,999
Female	990	1,000–1,999

Because of such low representation in clubs for the deaf and low rates of participation in activities organized by deaf leaders, names of deaf persons who are black often cannot be found through such sources. Furthermore, a kind of indirect discrimination results because black deaf persons frequently do not learn of services available to deaf persons in their areas.

Another factor influencing both case-finding and integration with white deaf people is the apparently low level of communication ability possessed by many black deaf persons. In this connection, certain findings of Furfey and Harte (*3*) may be of interest. They attempted to rate their respondents' communication abilities on a scale ranging from "excellent" to "below average." These comparisons are with other deaf persons so, as the authors point out, a rating of "excellent" in speech and speechreading does not imply good communication with hearing persons because the average deaf person is not very successful in such communication.

They rated 46 percent of the nonwhites, as opposed to 15 percent of the whites, as below average in communication by speech and speechreading with hearing persons. Likewise, 49 percent of the nonwhites, but only 17 percent of the whites, were rated as below average in communication by signs and fingerspelling with other deaf people.

Insofar as these figures may be said to represent deaf persons nationwide, they indicate that black deaf persons may have difficulty integrating with other deaf persons. They also suggest one reason for the apparent isolation of many black deaf persons from the larger hearing community. Again, they implicate a kind of indirect discrimination against black deaf persons insofar as people with minimal communication skills are unlikely to be informed of services for which they are eligible. Finally, the figures reflect negatively upon the schools these black deaf persons attended.

CONCLUSIONS

The picture emerging from these data is one of extreme isolation. Cut off from the hearing community by deafness, from the deaf community by race, and from help from service agencies by indirect discrimination, black deaf persons often appear to live quite lonely lives. They often meet with frustration in attempting to find and keep good jobs, in attempting to live normal social lives and in attempting to find the assistance they need to overcome the effects of their lack of adequate education.

What is being done now for this population? Regrettably little. The New York University Deafness Research and Training Center is planning to develop new approaches to the Harlem deaf population, especially those who are multiply handicapped. Kendall School for the Deaf in Washington, D.C., was recently awarded a grant for among other things, expansion of educational services including preschool activities, for the city's deaf children. Also in Washington, the District of Columbia Division of Vocational Rehabilitation is experimenting with a number of innovative programs. Other activities in St. Louis, Kansas City and Chicago deserve mention.

Mr. Glenn Anderson, Coordinator for the Deaf in the Michigan Division of Vocational Rehabilitation is currently preparing a paper on discrimination against black deaf persons. At San Fernando Valley State College, Mr. Linwood Smith is developing a project with this population, following guidelines set down by Ernest Hairston and John Bachman in their 1967 project at the Leadership Training Program. Other projects, unknown to the author, undoubtedly are in progress in various parts of the country.

This paper has considered some of the important information currently available on the black deaf population. It has hopefully spotlighted the fact that critical data on this group are entirely too meager. Some aspects upon which future research might concentrate include:

(1) How prevalent is racial discrimination in the deaf subculture? What forms does this discrimination take? In what ways might this be modified?

(2) Why do so many black deaf youth leave school without graduating? What ways might be found to enrich education, especially in the direction of preschool education, for inner city and ghetto deaf persons? One especially important question in this connection concerns whether we would provide a better education for all deaf children in those states which have recently desegregated their schools for the deaf if these states consolidated their efforts into one school for white and black deaf children together.

(3) What case-finding techniques would be most effective with inner city deaf populations, which are often predominantly black? Is it true that rehabilitation is generally failing to reach and serve this population?

(4) What are some of the salient demographic characteristics of this segment of the deaf population? How do these persons compare to white deaf persons and to hearing persons in such areas as education, employment, social life, communication abilities, marriage and fertility rates, standard of living, prevalence of deafness and of multiple handicaps?

(5) What effect, if any, does the additional minority group status of deaf persons who are also black have upon their psychosocial development? Do some black deaf persons have special ego and self-identity problems? Does deafness effectively preclude identification with the larger "Black America," especially with the struggle of blacks for equality?

I would like to close with the suggestion that this Convention convene a committee to study various aspects of some of the questions just raised. Additionally, I would recommend the establishment of an Ad Hoc Committee on the Education and Rehabilitation of Black Deaf Persons by the following bodies: the Social and Rehabilitation Service, the Bureau of Education of the Handicapped of the Office of Education, the Professional Rehabilitation Workers with the Adult Deaf, and the Conference of Executives of American Schools for the Deaf. This Committee, under which each participating organization would have a subcommittee studying those problems it is most qualified to handle, would establish basic priorities and procedures for improving educational and rehabilitation services for black deaf persons.

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CAREER DEVELOPMENT OF DEAF YOUNG PEOPLE

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What questions are most pressing in the career development of deaf young people? Some of these are:

1. What career development concerns do deaf students have at various grade levels that are most relevant?
2. How do deaf students reach out beyond the boundaries of the "deaf job"?
3. How can deaf students be introduced to a diverse range of educational and occupational goals, as well as to educational and occupational strategies for reaching these goals?

These and similar questions are the substance of vocational decision-making. The purpose of this presentation is to describe a process defined as career development, and to present its unique way of organizing vocational knowledge for easier comprehension and use by teachers and dissemination to deaf students. The career development process will be described in terms of a series of vocational developmental stages that provide a basic definition. From these vocational developmental stages, vocational developmental tasks and developmental propositions are, then, derived which describe the construction of student-centered vocational investigation and exploration activities.

Let's ask the critical question: "What is career development?" Choosing a vocation is presumed to be a process, not simply an isolated act. As the process of career development evolves, changes in vocational behavior over time should follow a continuous, orderly pattern; they should not be random and unsystematic for development to occur. These changes should be interrelated and lead to an end product; and they should proceed in certain sequences and according to established principles. Certainly, career development is a dynamic process which involves interaction between the individual deaf person's repertoire—interests, abilities, competencies, and communication skills—and the work related demands made by society, that is, by the development tasks. It is a long-term process that continues by stages throughout one's life. Career development emphasizes the progressive development of student self-reliance. A major assertion, then, is that students should assume more and more responsibility for their vocational development to achieve a "sense of agency"—that is, each deaf student will feel that he is directing or piloting his vocational planning.

Career development, like most processes that involve progressive changes in a product or organism, can be broken down into specific stages. This particular approach to career development may be described by a series of vocational developmental stages: Growth (Childhood), Exploratory, Establishment, Maintenance and Decline (Super and Bachrach, 1957). The development of effective vocational behavior in each vocational developmental stage will be viewed within the framework of three major constructs. These are: (a) Human Development, (b) Developmental Tasks, and (c) Developmental Propositions. Each term needs to be defined:

Human development

As before, development is seen as a patterned, orderly, life-long process that leads to effective vocational behavior; that is, behavior that permits long-term control of environment where possible, and control of the individual's affective responses to those aspects of the environment that he cannot control. The process of development includes gaining understanding, assigning meanings, and organizing behavior. Development is orderly, but each individual develops in his own unique way (Blocher, 1966).

Developmental tasks

A developmental task is a task which arises at or about a certain period in the life of the individual, successful achievement of which leads to his happiness and to success with later tasks, while failure leads to unhappiness in the individual, disapproval by the society, and difficulty with later tasks (Havighurst, 1953). The important part of this concept is, of course, the idea that each task is ideally mastered at a particular stage of development, and that such mastery is necessary for the continuation of optimal development.

Developmental propositions

Developmental propositions or activities that a deaf student would choose facilitate his introduction to, his involvement in, and his completion of appropriate developmental tasks. After completion of the developmental activity, a deaf student will acquire a set of vocational behaviors and competencies that he learns to use at the next stage of development.

VOCATIONAL DEVELOPMENTAL STAGES

Growth stage (birth to age 14)

Career development actually begins in early childhood when children play at fantasy occupations. They choose roles in terms of people they identify with. A five-year old, impressed by the gentle reassurance his pediatrician offers, may say, "I want to be a doctor." Another child, thirsting for adventure, may announce, "I'm going to be an astronaut!" Children can neither project themselves into their adult future nor judge their own abilities. But even the most outrageous occupation fantasy helps to build a child's confidence. Again, in this stage of vocational development, the child's vocational self-concept develops through identification with key figures in the family and in school; a child's needs and fantasy dominate the growth stage of vocational development, particularly from the years 4 through 10.

During the growth stage, there is only a dim awareness of how one goes about obtaining an occupational goal, primarily because vocational choices in early childhood are largely unrealistic. They are the product of fantasies, daydreams, and the desire to grow up, rather than experiences based upon consideration of reality. Near the end of the growth stage, however, occurs a discernible movement toward a greater realism in the vocational behavior of a ten- or eleven-year old. He gradually develops the realization that the problem of vocational selection is his responsibility. His abilities and likes are given more weight and become the major determinants of aspirations and activities.

Developmental tasks of the growth stage

Vocational developmental tasks relate directly or indirectly to the world of work. The vocational developmental tasks listed below are in chronological order for the growth stage:

1. A deaf child begins to develop a sense of self—including a self-image.
2. A deaf child develops a sense of extension of self—that is, belonging and sharing with others—other children, other friends, and other teachers.
3. A deaf child develops an ability to undertake cooperative activity.
4. A deaf child chooses activities suited to his abilities.

5. A deaf child identifies with a worker—father, mother, or other significant person in the life of the child.
6. A deaf child assumes responsibility for his own action.
7. A deaf child performs chores around the house.
8. A deaf child develops initiative and industry, the qualities of planning and attacking tasks.
9. A deaf child organizes his time and energy for doing school work and chores.
10. A deaf child begins to learn deferral of immediate gratifications for the sake of larger goals (for example, putting work ahead of play in appropriate circumstances).
11. The deaf child begins to set realistic standards for his performance, both for school and for work in the home.
12. A deaf child takes pride in his achievements and himself as a neophyte worker.

Developmental Activities

It is not difficult for a teacher of deaf young people to fit a career development program into the school curriculum. If a career development program were instituted, it might be organized as follows:

1. A deaf child investigates the work activities of his father, his mother, and other members of his household.
2. A deaf child identifies and investigates occupational roles in his immediate environment—his school, church, and familiar stores and businesses in his neighborhood. As deaf children develop plans to accomplish this objective, they might conduct a survey of upper school children's attitudes toward their experience in the middle school, or they might also conduct a survey of occupational patterns of workers in their educational setting.
3. A deaf child identifies and interacts with community helpers who protect and serve them—policemen, firemen, and doctors.
4. A deaf child explores the widening community. He may emphasize transportation, communication, or other major industries.
5. A deaf child concerns himself with the world of work at the state level, including investigation and identification of its primary industries.
6. A deaf child's occupational investigation broadens, covering the industrial life of the nation. He selects industries from various geographical sections for study.
7. A deaf child's occupational explorational program may, then, expand to include the entire Western Hemisphere. Work styles in Canada and South and Central America are contrasted with occupational life in the United States. Furthermore, he might contrast work or occupational styles in Far Eastern or Oriental cultures with the world of work in the Western Hemisphere.

As these activities indicate, the career development program divides naturally into two groups: the early elementary, in which the child is primarily concerned with work in the familiar setting of home and community; and the later elementary and middle school in which the child's concept of work expands to include large geographical areas outside of himself and his immediate surroundings and abstract ideas.

Exploratory stage (ages 15–24)

The exploratory stage in career development builds upon the activities of the growth stage and emphasizes the role of the family and the self-concept in career development. This vocational stage is a period of social-vocational maturation during which the individual deaf student should make the transition from childhood into adulthood and should engage in a process of intensive exploration of self and the world of work. This exploration should occur in three primary areas of socialization—the home, the school, and the work setting.

In the home, the deaf student learns about himself and occupations through continued contact with parents, siblings, and relatives who describe and discuss their jobs and through involvement in the activities of the family. In the school, the young deaf person supplements the family-centered experiences with exploration of self and work through interaction experiences with peers and teachers. He tries out, evaluates, changes, and accepts or rejects the perceptions of himself in occupations which he acquired during the preceding phase of development, the growth stage. In the work place, if the deaf student is engaged in a work/study program or in part-time work experiences, the young deaf person evaluates his interests, capacities, and values and begins to develop a self-image which he, then, molds or expresses vocationally. In all, the exploratory stage is one of discovering and re-discovering yourself, often relating yourself to the world of work. During the exploratory stage, the individual deaf student's perceptions of his aptitudes, interests, and personality characteristics become clearer, more accurate, and more highly integrated. The expectation is that the more vocationally mature individuals will thoughtfully uncover their vocational assets and liabilities, thus leading to later self-awareness and self-knowledge.

Just as the individual deaf student learns more about himself as he proceeds through the exploratory stage, he also gathers more information about jobs and occupations. Therefore, accuracy and extensive job knowledge should differentiate the more from the less vocationally mature.

In the exploratory stage, the more vocationally mature person not only should have greater knowledge about self and work, but attempts to relate one to the other. He thinks about his competencies and how he might express, utilize and develop them in the world of work. He attempts to "bridge the gap" between himself and the world of work.

Developmental tasks (exploratory stage)

The developmental tasks of the exploratory stage are built upon similar developmental tasks of the growth stage, and attempt to insure a smooth transition from school to work. The developmental tasks of the exploratory stage are listed below:

1. A deaf student develops achievement-oriented behaviors necessary for effective work; concentration, organization, planning, gratification deferral, self-criticism, intellectual curiosity, logical problem-solving, and critical thinking.

2. A deaf student learns how to study effectively, organize his time, and plan his activities in accordance with a personally relevant value hierarchy.
3. A deaf student chooses an appropriate high school.
4. A deaf student selects an appropriate high school curriculum.
5. A deaf student plans either for post-secondary education or immediate entry into the world of work.
6. A deaf student, then, chooses either an appropriate post-secondary curriculum or a suitable entry-level job.
7. A deaf student develops technical and social competencies required for successful employment.
8. A deaf person learns to produce in the work situation under adult performance standards.

Developmental activities (exploratory stage)

Throughout the exploratory stage, the deaf student is involved in an intensive sorting process—sifting bits of information about self, education, and employment and, then, forming a career development plan. Sound vocational decision-making skills are the bases for beginning this sorting process and would facilitate completion of the outlined vocational developmental tasks of the exploratory stage. Therefore, I would suggest that teachers of young deaf people focus on decision-making skills as an integrative method during this stage of vocational growth. A sample outline for a decision-making curriculum follows:

1. Introduction to decision-making—
    - (a) Post-high school planning.
2. Recognizing choices for critical decision—
    - (a) Defining critical decisions.
    - (b) Ages for critical decisions.
3. Determining goals—
    - (a) Setting and defining clear short-term and long-term goals.
    - (b) Working toward goals.
4. Interests, and how they affect planning—
    - (a) Changing interest patterns.
    - (b) Self-evaluation of changing interest patterns.
    - (c) Weighing interest for post-high school planning.
5. Values, and how they influence decisions—
    - (a) The significance of values.
    - (b) Job values.
    - (c) What most students value.
6. Considering alternatives—
    - (a) Identifying alternatives.
    - (b) Discovering alternatives.
7. Getting information—
    - (a) Evaluating sources of information.
    - (b) Seeking information.
8. Tests and grades—
    - (a) The meaning of test scores.
    - (b) Factors that affect grades.
9. Considering risks—
    - (a) The element of risk in decision-making.
10. The world of jobs and careers—

  - (a) Describing occupations by area and level.
  - (b) The occupational model.
  - (c) Learning about jobs and careers.

11. The relation of education to work—
    - (a) Educational roads to occupations.
    - (b) An occupational roadmap.
    - (c) Relating information about jobs and education.
12. Making the decision—
    - (a) Reviewing the decision-making steps.
    - (b) Getting it together.

Obviously, the elementary and secondary teachers of deaf children are most concerned with the growth and exploratory stages of vocational development. However, three additional stages of vocational development occur upon or after entry into the world of work. These are: (a) establishment—a deaf student acquires an identity as a worker in the occupational structure, (b) maintenance—a deaf person becomes a productive employee and advances within the industry, and (c) decline—a deaf worker contemplates a productive and responsible life. The decline stage ends, of course, with death, which for a typical individual brings to a close a span of career development embracing more than half a century of preparation for and participation in the world of work. In point of fact, career development may be defined as vocational planning from the womb to the tomb.

With respect to career development, it is our individual and collective skill to take the time to look at deaf students as unique, vibrant human beings who can become successful leaders and contributors in the academic, corporate, or governmental marketplaces. I dare all of us to be imaginative and creative, as we build sound career development programs sensitive to the needs of our students. We may not get the job done in '71. But let's begin.

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PRACTICAL INFORMATION ON CAREER ORIENTATION

Walter Eugene Hines, M.S., Iowa School for the Deaf

I have been invited today to discuss the program initiated with the seniors at the Iowa School for the Deaf the spring semester of 1971.

This program was set up and coordinated by three agencies, Iowa Western Community College, Iowa State Division of Vocational Rehabilitation and the Iowa School for the Deaf. The course was titled "Practical Information on Career Orientation", the length of the course was 30 hours. The course was designed to offer the following information to the seniors:

To provide information which will enable students to orient themselves to employment in the world of work, and to provide information which will assist the student to choose further education as the next step into employment, if this is most advantageous.

To acquaint students with as many job related situations as possible.

To provide the student with the opportunity to see actual working conditions as encountered in a large manufacturing firm.

To provide speakers to give the student an understanding of the problems encountered by the deaf in the working society.

To acquaint 35 seniors of the Iowa State School for the Deaf with the campus facilities of IWCC.

To let the student observe actual classroom procedures and other campus activities as they occur.

Perhaps it would be in order first of all to explain just how a program of this nature got off the drawing board. No person in particular is responsible in such a hearty undertaking and this program isn't an exception. During a session between the local vocational rehabilitation counselor and the guidance personnel at the Iowa School the topics of job readiness, in decision as to careers, problems encountered by young deaf adults seeking employment and advanced training selections by the young deaf adults were being discussed when someone stated it would be nice if we could devise a program with successful deaf adults dialoging with the seniors. Another thought was to incorporate this into a career project away from "The Establishment" and have it more on an adult basis. More discussion followed—such as location, need for interpreters, personnel to teach, etc. A committee was formed to look into and draft a rough proposal. This rough draft along with a good salesman, approached the director of regional DVR in Council Bluffs. The director was impressed with the tentative program and he started the thoughts on their way to reality. Funds were tentatively set aside to implement the program providing we could sell it to the local community college. Another meeting involving the Community College persons as well as the Iowa State Vocational Rehabilitation Consultant to the deaf and hearing impaired was set up. At this time the program looked good but too many people were still shying away from it. Personnel to implement the program at the college was a question as no one seemed to be familiar with the deaf. We had but one hope left, the Community College was hiring a director to coordinate a program for the hearing impaired and he was due on the job March 1st. Let me digress at this time to explain that the initial planning for the program was but six weeks from the idea to its implementation. The entire program then hinged on selling it to the new director. Each time the newly formed members of the Advisory Committee for the Career and Education Program for the deaf met, we had faith that the rewards and career awareness that the seniors would hopefully get was well worth the frustrations.

The director arrived on the Community College job and was very receptive to the idea. He proceeded to draw up plans and to implement the program. He held two meetings, contacted an instructor who said he would be willing to teach the course. The contract was drawn up and the program got off the ground on March 18. In the interim from March 1st to the 18th, facilities, equipment, personnel, business places and materials all were secured with the utmost precision. Eight successful deaf were contacted in person or by mail, six accepted and were used in the program. Six businesses were visited and two were selected as well as the materials gathered from the personnel offices of all the firms. Transportation was arranged, interpreters hired, video tape and media help solicited. Each agency shared in the total picture. Perhaps the phrase "Cooperation for Careers" is the best title for this program.

That will give you a brief look at the history of the program. Now I would like to discuss the curriculum of the course and how we arrived at the 30 hours of activities which were used in the course and also how we delimited it. First of all we settled for the Title of "Practiculum on Career Orientation". By using the word practical we ascertained motivation would be enhanced. With this theme we proceeded to eliminate theory and go for practical settings that 35 seniors could actively take part in. We used two deaf adult women, one was working at a large insurance company in Omaha, the other was a housewife who was attending the Community College. The deaf men used in the dialogue portion of the course had these various backgrounds: a printer; a foreman; a business man; and a state highway commission employee. These speakers were given suggestions for topics related to this program—such as:

1. Problems you encountered in finding your job.
2. Communication on the job.
3. Leisure time activities.
4. Job responsibilities.
5. Disappointments.
6. Overtime pay and lay-offs.
7. Job description—etc.

This is a very brief outline and the speakers were encouraged to discuss life on their job as they saw and lived it. The total time allotted for dialogue was six hours. This included question and answer periods.

The necessity of putting this program on an adult basis led us to look at settings away from the residential school, so consequently, all classes were held at the Community College. We allocated four hours or two sessions to post-high school facilities and the careers offered at the Community College. The Iowa Western Community College has both the vocational subjects as well as Applied Arts programs. The students were allowed to select four or five different career areas and were allowed to sit in on the classes in action with college students helping them and answering their questions. We felt there was a need for a better understanding and utilization of the various agencies available for job seeking in Iowa, such as—Iowa Rehabilitation, Iowa State Employment, Private Employment Agencies, Want Ads, Walk-ins and School Placement. Speakers from Voc Rehab and State Employment Offices spoke to them. Two hours was allotted for this segment of the course.

Four hours or two class periods were set aside for job interviews. Four students went through the entire sequence with personnel directors acting as the employer. For the entire first two-hour period, these interviews were taped. The class viewed and commented at the next two-hour session. They also filled out various application forms at this session.

Field trips to area industries and talking to deaf workers and personnel directors on the job encompassed four hours or two periods. One hour was devoted to talks, one by a foreign exchange student from South America. He discussed jobs and careers in his home country. The remaining nine hours was spent divided between job careers, leisure time activities, job termination, upgrading, filling out federal and state forms, resumes and portfolios building, career oriented and student career oriented questions and problems.

This gives you a brief idea as to course content and how we delimited the course to the practical aspect of careers. The 35 seniors were given course outlines before we started and were asked to comment on the materials. Some of the comments were "Are you going to force us to go"? "Looks good—but at night"! Just about all the questions they had disappeared after the first night session. All classes were held at night with the exception of the tours. Why I say that most all the questions disappeared the first night was a stroke of luck. As part of the overview of the campus, they got in on a dance the same night. Their comments about college life changed to "It's not bad".

The course was not required and participation was entirely voluntary. We had nine students on different OJT programs and they arranged with their employers to be off for the classes and field trips.

What impact did this have on our students? This is a very difficult question to answer at this stage but I will describe some of the changes in the seniors' career selections and objectives.

We had ten students pass college entrance requirements. Six said that they were going before they started the course. Now all ten have completed plans for college. Of the nine students on the job training before the course, one will remain at work, the others will be going to TVI or area schools for post high school training. The one student going into the world of work indicated that he will go to night school at IWCC in the printing area. Out of the class of 35 and at the time of this writing, 32 will go on for post high school training with the remaining 3 questionable.

The students were encouraged to discuss frankly what they wanted, what they didn't like about the program, etc. These comments on a questionnaire were for the most part very complimentary. They did however, desire more job information, more video taping, etc., and more time to sit in on the college classes. They all seemed to like the dialogue portion of the course.

Many of the staff at IWCC became familiar with the deaf through this program. Many questions were brought up in the various classes in high school and the teachers discussed them with the students. The high school and vocational instructors were told about the program and encouraged to discuss the topics with them. Articles were written by students for the school paper. The local newspaper and the entire state was given information through an article written in a state-circulated newspaper. But perhaps the most important person to coordinate the program was our high school guidance teacher. When time didn't allow for thorough coverage at the college, the instructor at IWCC would coordinate with him to expand on the topics in his classroom.

We are hoping to place this program on a permanent basis for the seniors at ISD. I would like to show you a few slides that a purely amateur has taken—bear with them and I will be happy to answer any questions that you may have.

THE DEVELOPMENT AND IMPLEMENTATION OF A CAREER DEVELOPMENT PROGRAM—ITS IMPLICATIONS FOR DEAF YOUNG PEOPLE AND TEACHERS

Colin E. Tisshaw, Principal, the Mackay Center for Deaf and Crippled Children, Montreal, Canada

As educators we bear a heavy responsibility to prepare our young for the challenges, demands and changes which they will have to cope with as adults. As educators of the deaf, our responsibilities are much greater, for in helping them to overcome the handicap of deafness, we must be more selective of the material utilized, more comprehensive in the methods employed, and more critical in our analysis of our modus operandi. One of our most crucial tasks is to prepare the students for active fully participative roles in life's activities as responsible adults.

The question that we had asked ourselves at the Mackay Center during the past few years was—In the educational environment that we have been providing were we sufficiently successful in offsetting the handicap of deafness to enable our graduates to play the role of aware adults that we purported to prepare them for? We felt that we had failed to adequately prepare them in our educational programs to function as responsible adults in the spheres of social and work activities. We were acutely aware that there existed an imbalance between the academic program covering varying aspects of adult relationships and responsibilities and the training program preparing students with highly developed vocational skills.

We therefore isolated the following factors as being major considerations in preventing the overall balanced intellectual and social development of our students. Firstly, it was considered that we had not only supported, but contributed to the dependency patterns sometimes exhibited by the deaf by having too much of a professional paternalistic attitude (albeit subconscious) taken towards their education. The "pate de foie" feeding of educational material always given under the guise of "being necessary for the deaf" appears to have led to a passive student relationship towards the authority figures and the school; which being a microcosm of society was considered by the students to represent the outside world of reality. This approach while considered to be effective in terms of assimilation of knowledge has been most unfair in supporting the development of independent student situational judgments. As a result of the haphazard program of exposure to industry, industrial methods and the world of work, students in our school were really unaware of the variety of work opportunities which they could consider within the range of their capabilities. Because of minimal exposure and lack of actual testing of skills in situations other than the classroom there seems to have been a lack of self awareness on the part of the students and consequently an unrealistic interpretation of suitability for various job functions. When there are over 26,000 listings in the occupational index there have been only hit and miss approaches made to discuss the suitability of various types of employment for our students.

Within the structure of the school itself, having a small deaf population of 72 pupils, there are obviously few course offerings available necessitating them to relate to a minimal range of options available in the school. In this respect to some extent we have inherited the traditional outlook towards deaf vocational training programs. The Center has developed apprenticeship training programs in the community to provide the training services which would be economically unfeasible to develop within our school for the very small numbers involved. These apprenticeship training programs are obtained after trying to teach individual social functioning skills and independence and responsibility. There is still very limited understanding on the part of the student in relation to the value of his saleable skills for the job market. In this connection some frustration has arisen as a result of occasional mis-matching of job requirements and student interests and capabilities.

In our program development there appears to have been too large a gap between the traditional school approach with the major stress on language development within the class and our vocational training program which stresses functional independence in all aspects of work and social situations, while also developing the specific job skills. Lack of internal coordination within the school has resulted in our not properly developing sufficient self-awareness, so necessary for a young adult to possess in order to function as a contributing citizen. It was this sense of frustration on the part of the staff at Mackay Center which led to the development of a comprehensive career development program. We have been restricted in the qualitative and the quantitative aspects of our guidance program due to the shortage of available personnel to adequately and effectively guide our students. We hope to remedy this weakness by developing a systems approach to the career development problem and lessen the reliance on short term late adolescent counselling procedures which we do not feel have been sufficiently effective to warrant their continuation.

In the fall of this year, the school operations will incorporate the following procedures to try to coordinate all of the services, skills and programs to enable our students to relate meaningfully to the environment and to be able to make decisions about it.

1. INSERVICE TRAINING PROGRAM

The school will have up to ten inservice training days throughout the school year plus a week in September to go over the following program concepts. Experts in the various fields will be brought in to address and work with the staff, outlining developments and establishing behavioural objectives in the various aspects of the curriculum.

2. LIBRARY OCCUPATIONAL RESOURCE AREA

During the past six months we have obtained much material concerning many occupations with varying employability requirements, roles, salary ranges, long term trends, etc. This resource file is an open area in the library and is built around the SRA Widening Occupational Roles Kit (WORK) which we feel to be invaluable in enabling a student to make realistic comparisons between the various jobs available in which he may express an interest.

3. LIFE CAREER GAMES

At the moment we are developing life career games which are suited to the students of lower academic capabilities which show through cause and effect sequences, interrelationships of the roles of the family, work, and social activities. A student who makes choices in any one of these areas is shown how their effects can spill over into the others and force life styles which may not have been predicted when the decision had been made. By utilizing meaningful activities which could be considered to be typical in adolescence we hope that the students will be aware of the decisions which they will be making in actuality after leaving school.

4. ELEMENTARY PROGRAM MODIFICATIONS

Through the work of the staff during in-service days behavioural goals will be established for each level which will improve on the areas of weakness which have been identified as being typical, and as being worthy of consideration in training deaf students. The goals will be set for all levels from Level I upwards and will be measured and revised through teacher meetings to be held twice a month. They are as follows:

(a) Quality of work

Minimum qualitative goals will be defined for the students and results demanded from them at all times increasing in difficulty with time, experience, performance capabilities and growth of skills.

(b) Quantity of work

Realistic task completion will be insisted upon at all times in keeping with students capability and skill levels.

(c) Cooperation

Class and work projects will involve teamwork so as to foster cooperative habits. Various out of class activities will also be structured so as to foster cooperation in work and recreation settings.

(d) Dependability

Task completion in academic and vocational settings will be required with decreasing amounts of supervision so as to foster the characteristics also supporting those mentioned above.

(e) Initiative

With clear cut behavioural goals defined, students will be encouraged to develop internal drives to start and finish a project with minimal supervision.

(f) Adaptability

By changing the class setting, routine, tasks and demand procedures, etc., we wish to constructively program for the development of this characteristic and to avoid the routine and repetitious nature of application to work and various tasks which tend to inhibit this skill.

(g) Personality

By expanding the present peer discussion groups which have been developed and working on the development of social awareness and consideration of others, we hope to make the students more aware of their responsibilities as individuals who have something to give to others, as well as being able to accept, graciously.

(h) Leadership

This quality we hope to develop through task completion in areas c, d, e, f, g and i. Responsibilities are to be assigned to evaluate functioning and developing skills, and foster the sense of leadership.

(i) Responsibility

This is of course interrelated with all areas of a to h. We hope to foster this through appropriate task demands with decreasing supervision as the youngsters mature.

5. Student Evaluation Program

For three years vocational students in modified "T" groups have rated stated behavioural characteristics weekly on the following basis: helpfulness; responsibility; attitude to work; attitude to pupils and staff; initiative and punctuality; neatness; and cleanliness.

The students in an open circle rate one of their members each in turn on a four point scale for a monthly total to choose a member of the class who, having gained the most number of points in a month, then has an afternoon off with a few dollars to go to a restaurant or to a movie. This technique with initial teacher supervision has been invaluable in allowing the students to see just how others see their performances in the above areas. Major problems and factors which have been identified up to now are:

1. The lack of reality in self-concept in social and work settings.
2. Anxiety state after real or imaginary slights or rebuffs.
3. Adolescent rejection of adult criticism, thereby making this method more meaningful.
4. Lack of developmental work and social experiences resulting in a dearth of awareness of the above factors.
5. Unrealistic demands of others which are shown clearly by peer criticism.

We are keeping records so as to identify longitudinal trends and be able to act on them as effectively as we can.

6. Cumulative Guidance Files

There are to be established individual guidance files which will be a part of the cumulative student files. Student queries and replies will be recorded so as to indicate unrealistic and realistic career choices. We hope to identify long range patterns and be able to work constructively with the student in providing professional continuity in this most critical area.

7. PARENT AND DEAF ADULT COUNSELLING SERVICES

The Home and School Association, The Montreal Association for the Deaf and Graduates have been requested to give career talks to our adolescent students. By having them interpret their role and degree of functioning in work and social settings, we hope to widen the student understanding of the role of the deaf adult in the adult world, covering three main areas of:

(a) Living skills.
(b) Vocational Aspirations and their realizations.
(c) Social Relationships.

8. BUDGETING

We are going to place less stress on abstract areas of mathematics for those students who are not going to University and thus not be utilizing concepts taught in the new math. The stress will be on such things as banking, use of credit and finance facilities and the necessity to be able to balance a personal budget within the actual salary range of the type of work for which the student would appear to be most suited.

9. JOB PROMOTION

Our emphasis up to now has covered job requirements at the initial placement level. We feel that it is most important to outline promotional procedures, advancement requirements and the degree of training and communication skills necessary for advancement to more responsible and more highly paid jobs.

10. VOCATIONAL PLANNING PROGRAM

We will be implementing the student behavioural objectives as outlined at the NTID Institute on Career Development for Deaf Students, which was held in December of last year in Rochester.

11. ROLE PLAYING

We wish to develop many more learning situations which would involve public queries, job interviews, social situations, etc. By using video-tape replays we can enable the students to see just how individual idiosyncracies, habits, and communications skills are seen by others. Our experience over the last few months in these areas has been most rewarding and has generated much excitement on the part of the students.

12. EXPERIENCE TRAINING

A program of providing decision making opportunities for students will be developed in the school and in the home from level I upwards. Home and School Meetings and Newsletters will elicit parental cooperation so as to provide continuity in this most critical part of personal development.

Our social service department will follow up this aspect with home visits to see if opportunities are being developed in the home. The school environment will be structured to provide maximum opportunities for the students to make decisions.

While these above mentioned points represent the core of the program it is hoped that through close team work and cooperation on the part of all members of the staff that further offshoots can develop. There will be twice monthly meetings held to discuss the problems encountered to develop the specific behavioural objectives and report on the degree of success or failure of them. It is felt that this professional approach will provide continuity for the students which will be so necessary for the program's success. Each teacher will of course be interpreting the program in an individual manner, however we hope to incorporate the broad concepts into all areas of the school so as to provide the continuity for the students and to allow them to grow in accordance with their capabilities.

Of course a program of this nature must of necessity be supported by all members of the staff. It must present and cover the range of human behaviour which the students will experience in dealing with members of the staff. Such a program of course calls for a shift in orientation, and alteration in the method of teaching. It thus will become more socratic, while placing much more responsibility for individual behaviour and choice on the part of the student at all stages of development.

We feel confident that this program will definitely facilitate the career development of deaf young people by instilling in them a sense of judgment to which they must apply personal interpretations in all situations from a very early age.

It is hoped that by the time they reach adolescence and have been exposed to a structured coordinated program covering a wide range of occupational options that they will be able to intelligently relate to the most suitable training programs and subsequently an occupation which will benefit them to the greatest degree and from which they will receive the most satisfaction. While this is very much in the pilot project stage, we are now ready to implement the program during the next year and look forward to the challenge it presents in providing a much more meaningful educational experience in the broadest sense to the students for whom we have a most awesome responsibility.

While the long term results will not be measured for quite some time, we hope to be able to report that by the end of the next school year we shall have attained short term objectives which will be instrumental in developing in our students a sense of individuality, flexibility, purpose and maturity, which is so essential for success in today's complex world.

Gallaudet Banquet (7 p.m.) "Hall of Industry", State Fairgrounds

6 p.m. Social Hour.
7 p.m. Gallaudet Banquet (Open To All) "Hall of Industry".

TUESDAY, JUNE 29—BUSINESS MEETING

Dr. Kenneth R. Mangan, President, presiding

Dr. Mangan. The meeting will come to order. At this time I declare there is a quorum in attendance here this morning. One hundred fifty members comprise a quorum. We have a lot of business this morning, so first of all we will have the report of the nominating committee for nomination of officers. Mr. Bill Peck is the chairman of that committee.

REPORT OF THE NOMINATING COMMITTEE

B. J. Peck, Oregon School

President Mangan, Jim Hoxie is actually the chairman of this committee, but he is not able to be here so he has asked me to assume that responsibility.

The committee is composed of the following: Jim Hoxie, chairman, Oregon; Lloyd A. Harrison, Missouri; Lewis B. Wahl, Gallaudet Day School, St. Louis, Mo.; A. W. Douglas, Texas; B. J. Peck, Oregon.

I would like to make the following report of the committee, and then we will vote by ballot. Now, this is the slate that we have nominated. As I read this I would like to ask those people that are here to stand so that you will have an opportunity to see these people if they are attending the Convention.

Suggested Slate of CAID Officers and Nominees

President.—Armin G. Turechek, Superintendent, Colorado School for the Deaf and the Blind.

President-Elect.—Jack W. Brady, Superintendent, Kentucky School for the Deaf.

First Vice President.—Robert T. Dawson, Principal, Florida State School for the Deaf and the Blind.

Second Vice President (select one).—Stanford Rupert, teacher, Mount Diablo, California School District. Cecelia A. Snapp, teacher, Fullerton, California Day Classes. Warren W. Fauth, teacher, California School for the Deaf at Riverside.

Secretary-Treasurer.—Gerald Burstein, teacher, California School for the Deaf at Riverside.

Directors (select two).—Carl J. Kirchner, teacher, San Fernando Valley State College, Northridge, California. M. Martha Lutz, teacher, Missouri School for the Deaf. Wm. J. McConnell, Superintendent, Virginia School for the Deaf at Hampton. Ricardo D. Gonzales, teacher, California School for the Deaf at Riverside.

Dr. Mangan. Thank you very much. We will now entertain nominations from the floor for the office of president-elect. It is moved and seconded that the nominations be closed. All in favor say aye. Opposed, no. Carried. Any nominations for the office of first vice-president.

Mr. Huff. I move the nominations be closed.

Dr. Stelle. Second the motion.

Dr. Mangan. All in favor say aye. Opposed, no. The motion is carried. We will now entertain nominations from the floor for the office of second vice-president.

Mr. Youngs. I move the nominations cease.

Dr. Mangan. It is moved and seconded that the nominations cease. All in favor, say aye. Opposed, no. The motion is carried. We will now entertain nominations from the floor for the office of secretary-treasurer. It is moved and seconded that the nominations cease. All in favor. Opposed. The motion is carried. We will now entertain nominations from the floor for Directors. It is moved and seconded that the nominations cease. All in favor. Opposed. The motion is carried. The slate then stands as presented by the nominating committee. We will now proceed with the balloting, and possibly we can announce the outcome before this meeting is over. If not, watch the Convention Newsletter. I think the nominating committee has done a good job in the selections they have made. The officers and the board members do a lot of work in the two years between Conventions, and this is certainly a responsibility. We will now declare the election closed, and they can start counting the ballots.

ELECTION RESULTS

President—Armin G. Turechek, Colorado School for the Deaf and the Blind.

President-Elect—Jack W. Brady, Kentucky School for the Deaf.

First Vice-President—Robert T. Dawson, Florida School for the Deaf and the Blind.

Second Vice-President—Warren W. Fauth, California School for the Deaf, Riverside.

Secretary-Treasurer—Gerald Burstein, California School for the Deaf, Riverside.

BOARD OF DIRECTORS

M. Martha Lutz, Missouri School for the Deaf.
Wm. J. McConnell, Virginia School for the Deaf.

Dr. MANGAN. We have a number of important items of business to take up this morning. One of the most important, and we have scheduled it early in the program so that you would have a good opportunity to think about it is the *Annals*.[1] As you know, the *Annals* is the journal of both the Convention of American Instructors of the Deaf and the Conference of Executives of the American Schools for the Deaf. Mr. Marvin Clatterbuck has been on the *Annals* Committee a number of years, and we have asked him to make this report this morning.

ANNALS REPORT

Marvin Clatterbuck, Oregon School for the Deaf

Dr. McKay Vernon, the editor of the literary issues, reported to the *Annals* Administrative Committee that the quality of manuscripts submitted has greatly improved. The editor has an editorial board that approves all manuscripts before they are printed.

Dr. Richard Brill, who has given outstanding service to the *Annals*, has resigned as associate editor. Dr. William Craig is the editor of the Directory, and reported several problems that caused difficulty in publishing the Directory. The *Annals* Committee took several steps to correct the difficulties.

There has always been some misunderstanding about the list of educators printed in the Directory. In the past only those names sent in by the Schools were included. Since some schools fail to report, the Committee decided to include names sent in by the schools and any others who are members of CAID.

The *Annals* wishes to present all sides of issues and invites those who have acceptable articles to submit them for consideration.

Advertising in the *Annals* has improved and the income is up. However, the cost of printing has gone up, and the quality of the *Annals* has been greatly improved. The editor has been limited to a certain number of pages in each issue because of cost. Three years ago the *Annals* financial status was not good. At that time it was decided to employ professional assistance to aid in improving the publication, and the executive secretary was asked to get the *Annals* on a sound financial basis. Both were done. The executive secretary has done an outstanding job. The publication of the Directory has been aided by federal grants, but the 1972 grant has not been approved, and if it is it will be for $25,000, which is only half of what has been received in the past. The Joint Administrative Committee wishes to be assured that the *Annals* can be published and improved in the future, since the $25,000 may be the last we will receive from the federal government.

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[1] *American Annals of the Deaf.*

The Conference of Executives has voted to support the *Annals* in the amount of $5,000 per year. Regular subscription rates have been increased to $12.50 per year. The actual cost of producing the *Annals* per year is just about $10 per subscription.

The Executive Committee of CAID, after careful consideration, wishes to recommend that Section 4 of Article III of the Constitution be changed. It now reads as follows: "Each person joining the association shall pay annual dues of $10, $5 of which shall constitute his subscription to the *American Annals of the Deaf*. (Effective July 1, 1967)"

The Executive Committee recommends that Section 4 of Article III be changed to read: "Each person joining the association shall pay annual dues as recommended by the Executive Committee and approved by the association". Mr. President, I would like to move that we adopt this change in our constitution.

Dr. MANGAN. Thank you very much, Mr. Clatterbuck. I think this is a very, very clear statement of the issues. Is there a second to Mr. Clatterbuck's motion?

Dr. STELLE. Second the motion.

Dr. MANGAN. The change in the constitution requires a two-thirds vote. There must be a quorum of 150, and we have already declared that there are at least that many present. The question is now open for discussion from the floor. There will be another motion immediately following this, which will set the dues with your approval. We will have a vote by a show of hands. Just keep your hands in the air until we get you all counted. All those in favor of the motion please raise your hands. 198 total. All those opposed the same sign. It is declared passed unanimously. We will now call on Mr. Clatterbuck again.

Mr. CLATTERBUCK. You may see through our strategy. It takes a two-thirds majority to change our constitution. Now, to raise the dues it only takes a majority.

The Executive Committee recommends that the dues be $15 per year, beginning January 1, 1972, of which $10 shall be for the *Annals* subscription. We feel this is the least amount we can possibly operate on and go forward as an organization and put out a good publication. Mr. President, I move the adoption of the recommendation.

Dr. MANGAN. Is there a second to the motion?

Mr. BRASEL. I second the motion.

Dr. MCCLURE. I might point out subscriptions to non-members will be $12.50.

Dr. MANGAN. Right, and we have a sizeable subscription list from non-members, about 1500, so there will be additional income, and in the discussion at the Executive Committee and elsewhere, it was the feeling that this organization has gotten to the point where we can live without federal subsidy, and it would be to our advantage to live without federal subsidy. We will become a more interested organization, and the *Annals* can become bigger. As Mr. Clatterbuck mentioned earlier, it has been indicated that the general quality of the articles has been improved; they are able to be quite selective, and there is a long list of articles that have not been published, so our journal is improving. The question has been called. All those in favor of the motion as presented by Mr. Clatterbuck, which is basically to increase the dues to $15 a year, which will constitute a subscripiton to the *Annals*, please raise your right hand. 206 in favor. All those opposed. I see none, so the motion is carried. We will now have the Report of the Council on Education of the Deaf Committee on teacher certification and teacher training, of which Ralph Hoag is the chairman. This committee has been working on new certification standards, and we will ask Ralph to give his report at this time.

REPORT OF THE COUNCIL ON EDUCATION OF THE DEAF COMMITTEE ON PROFESSIONAL PREPARATION AND CERTIFICATION

Ralph L. Hoag, Ed. D.

This report was prepared at the request of your President so that you would have a record of the activities of this Committee during the past two years on the development of standards for the preparation of teachers of the deaf.

The Committee's work started in July of 1969 at the joint meeting of CEASD and CAID in Berkeley, California. The Committee was given the assignment to update and revise the standards for teacher preparation using the 1969 report of the ad hoc committee on teacher preparation known as the Connor-Stelle Report as a starting point.

The Committee also received the Castle-Wycks Report to use in its work. This report was prepared by the ad hoc committee on standards for training teachers of vocational subjects and other special content areas.

The first draft of proposed standards was prepared by the Committee in December of 1969. This was published for distribution in March of 1970. Distribution included all members of the Executive Board, directors of teacher preparation centers, directors of special education in State Departments, government personnel interested in the education of the deaf, and persons attending open meetings held to discuss the activities of our Committee on the revision of standards.

The three open meetings, suggested by the Executive Board, were held. Your chairman attended two additional national conferences by invitation to discuss the contents of the March draft of proposed standards. Each of the three major open conferences was taped and later transcribed so that this information could be reviewed and used by the Committee in the preparation of the next draft.

REPORT OF OPEN MEETINGS HELD

Conference of Executives Meeting, St. Augustine, Fla.—April 9, 1970

The Florida meeting was attended by some 150 persons representing school administrators, teachers, State Department personnel, university teacher educators, the deaf, and others. A panel composed of members of the Executive Board and the Committee participated in the discussion.

Alexander Graham Bell Association Convention, Philadelphia, Pa.—June 25, 1970

At the A. G. Bell meeting, there were over 100 persons present with teachers, teacher educators, administrators, the deaf, and parents represented. A similar panel of members of this Executive Board and the Committee participated in the discussion.

Special Open Forum, Berkeley, Calif.—October 17, 1970

Invitations were sent to all groups in western states thought to be interested in the activities of this Committee. These included State Departments, universities, and administrators and teachers of schools and classes for deaf children. Nearly 100 persons representing states, universities, teachers, parents, and the adult deaf attended and participated in the discussion. Again, members of the Committee were represented and participated in the discussion as panelists.

National Association of the Deaf, Minneapolis, Minn.—August, 1970

Your chairman was asked to discuss the work of the Committee in an open session at the NAD national meeting. Many teachers, rehabilitation personnel, and interested deaf adults attended. Over 150 persons were present. Comments and suggestions were noted and recorded for use by the Committee.

National Meeting of State Directors of Special Education, Seattle, Wash.—July, 1970

Approximately 40 State Department personnel were present to hear a report of activities of this Committee. Your chairman attended this meeting by special invitation of the president and program chairman. The work of the Committee was discussed with interest. Suggestions from this group were also noted and recorded for use by the Committee.

General Summary of Discussion

All meetings held were productive. In general, the attitude that prevailed was positive and constructive. Negative and critical comments were made. However, these were by far in the minority when compared to positive and supportive comments offered. It is felt that most negative comments were dealt with satisfactorily by each panel to the satisfaction of others present at these meetings.

There appears to be universal agreement that changes in standards are in order at this time. The contents of the March 1970, draft of the document in its present form were very obviously not acceptable. On the other hand, many of the principles contained in the document were.

Some of the major issues included documentation of competencies in detail, identification of teacher preparation goals in behavioral terms, more specific attention to training in the use of media and technical teaching materials, and a rather determined desire for the Committee to involve other resource persons in addition to the Committee in preparing its next revision of standards report.

APPOINTMENT OF RESOURCE PERSONS

The President of the Council on Education of the Deaf (CED), in response to suggestions made at the open meeting in Philadelphia, appointed the following individuals to serve as resource persons to the committee:

Dr. Sheila Lowenbraun
Assistant Professor
University of Washington

Dr. Gilbert Delgado, Chief
Media Services and Captioned Films
U.S. Office of Education

Mr. Mervin Garretson
Director
Division of Instruction
Model Secondary School
Gallaudet College

Dr. Todd Eachus
Staff Associate for Research
Northeast Regional Media Center for the Deaf
University of Massachusetts

Mr. Stephen R. Mecham, Consultant
Education for the Hearing Impaired
Connecticut State Department of Education

Each person accepted the appointment and participated with the Committee in the preparation of the proposed draft now identified as the February 1971, version.

NOVEMBER MEETING OF THE COMMITTEE

A meeting of the full Committee together with the resource persons named above was called and held November 4–7, 1970, in New York. The Lexington School for the Deaf served as host for the meeting. Every member of the Committee and all five resource persons were able to be present and participate in this meeting.

An attempt was made in planning the conference to make maximum use of the time when all participants could be together. Resource materials, reports, and the former draft standards were mailed for review prior to the meeting. Printed transcripts of all tapes of open meetings, position papers, and pertinent correspondence were distributed and reviewed in early sessions. Smaller group committees were formed for writing assigned segments of the next draft. The written contributions of the small groups were reviewed in plenary session and revised for final editing. A raw document was completed before the close of the meeting on November 7, 1970.

This rough draft was printed and sent to each Committee member and appointed resource person for review and comment. The results of this review during December, 1970, were compiled, edited, and printed in draft form and redistributed to Committee members. Each person was asked to provide your chairman with directions for preparing a report to the Executive Board.

All Committee members and all five of the resource persons responded. The response was unanimous that this version of *Proposed Standards for the Certification of Teachers of the Deaf* could be presented to the Executive Board as an *interim* draft report (subject to minor revision and editing) representing in principle the standards that should be used by the CED for certification purposes.

The Executive Board accepted the report and directed the Committee to work on the document editorially for presentation to member organizations for final approval.

The CED Committee on Professional Preparation and Certification, including your own organization's appointed representatives, now submits this document for approval by the Convention of American Instructors of the Deaf. We therefore ask that you authorize your representatives on the Council on Education of the Deaf Executive Board to vote for approval.

Committee:

Dr. Ralph L. Hoag, Ch.
Dr. Roy M. Stelle, Secy.
Dr. Richard G. Brill
Dr. Richard F. Krug
Dr. Leo E. Connor
Dr. Jean Utley Lehman
Mr. Bill G. Blevins
Miss Josephine Carr
Miss Grace H. Hanson
Mr. Herbert G. Barkwloo
Miss Lucy M. Moore
Dr. C. Joseph Giangreco

PROPOSED STANDARDS FOR THE CERTIFICATION OF TEACHERS OF THE HEARING IMPAIRED—JUNE 1971

INTRODUCTION

The Council on Education of the Deaf, hereafter referred to as the CED, is a national body with representation from the following organizations: The Alexander Graham Bell Association for the Deaf (A. G. Bell), The Convention of American Instructors of the Deaf (CAID), and The Conference of Executives of American Schools for the Deaf (CEASD). The membership of these organizations represents most of the professional personnel engaged in the education of hearing impaired children in the United States. A substantial portion of the educators of hearing impaired children in Canada are also members.

This document presents a two-level program of minimum standards adopted by CED as requirements for the certification of instructional personnel employed in educational programs for hearing impaired children. These supersede requirements established by educators of the deaf prior to 1930, adopted by the Alexander Graham Bell Association for the Deaf in 1930, adopted by the Conference of Executives of American Schools for the Deaf in 1931, and amended in 1952.

These standards were not prepared with any intent to endorse any one method, a combination of methods, or a particular philosophy of teaching as being superior or more productive than another. Rather, every educational program and interested group is encouraged to evaluate and experiment with a variety of methods, procedures, and materials which might lead to improvements in the education of hearing impaired children.

Standards adopted for the certification of professionals in any field of service, to be effective, must include all the practical and workable requirements considered by the profession as essential for the preparation of persons entering and working in the field. Further, they should be designed to serve as guidelines for the upgrading of professional competencies.

The certified teacher must have certain specific competencies that will enable him to provide appropriate educational services in one or more special areas. Specification of these areas provides the essential basis for establishment of a system of professional certification. For the teacher of the hearing impaired, this implies a general competence to identify and evaluate resulting educational problems in all individuals from infancy through adulthood. The certified teacher, then, is expected to have a broad general knowledge of the field, with special abilities as a teacher in at least one area of specialization, and possess at least a baccalaureate degree.

DEFINITIONS

Terms included in the following are those that may have a variety of meanings when found in educational writings and reports. These terms are defined here to clarify the intended meanings as used in this document.

Hearing impaired

A hearing impaired (deaf or hard of hearing) individual is a person who requires specialized education because of a hearing impairment.

Provisional certification

This is the initial level for certification of a teacher of hearing impaired children.

Professional certification

This is the second and highest level of professional certification of a teacher of hearing impaired children.

Areas of specialization

Possible areas of professional specialization for a teacher of the hearing impaired include the following:

PREPRIMARY

Identifies teachers who work with children below the age of six. There are two sub-groups within this area of specialization. These are as follows:

Infants.—Identifies teachers who work with parents and hearing impaired infants in a variety of educational settings.

Nursery.—Identifies teachers who work with children between the ages of three and six years in a school setting.

ELEMENTARY

Identifies teachers who work with children across broad curriculum areas from the time of the beginnings of formal academic work at approximately the age of six to entrance into a secondary program.

SECONDARY (ACADEMIC AREA)

Identifies teachers who teach academic subjects to children beyond the elementary grades (e.g., mathematics, social studies, English, science).

SECONDARY (SPECIAL SUBJECT AREA)

Identifies teachers who teach special subjects other than academic subjects to children beyond the elementary grades (e.g., printing, industrial arts, business education, home economics).

MULTIHANDICAPPED

Identifies teachers who teach hearing handicapped children with additional physical, mental, or emotional handicaps which significantly interfere with educational progress.

SPECIAL CONTENT AREA

Identifies a teaching professional or resource teacher who works with hearing impaired children in special curriculum areas that may cross all age levels (e.g., library science, art, speech, media, physical education).

Approved teacher preparation center

An approved teacher preparation center is a college or university whose program leading to provisional and/or professional certification of teachers of the hearing impaired has been approved by the Council on Education of the Deaf.

Practicum

This consists of all aspects of the teacher preparation program including observation, participation, clinical practice, and directed teaching in both classroom and out-of-classroom situations which bring a student into direct contact with hearing impaired children and adults under the direction of qualified instructors, master teachers, and practicum coordinators.

Internship practicum

This refers to paid experience in teaching and working with hearing impaired children under qualified supervision.

Media

This includes all print and non-print materials which are integrated into learning procedures and the general curriculum.

Instructional technology

This is the employment of combined human, mechanical, and technological resources used in all aspects of instruction including design, production, direct use, and evaluation of the teaching and learning processes involved.

Practicum coordinator

This refers to one who holds professional certification by CED and directs and supervises the practicum program.

Cooperating teacher

This refers to a teacher with professional certification by CED who has direct supervision of the student teacher during his practicum experience.

Prerequisites to Provisional Certification

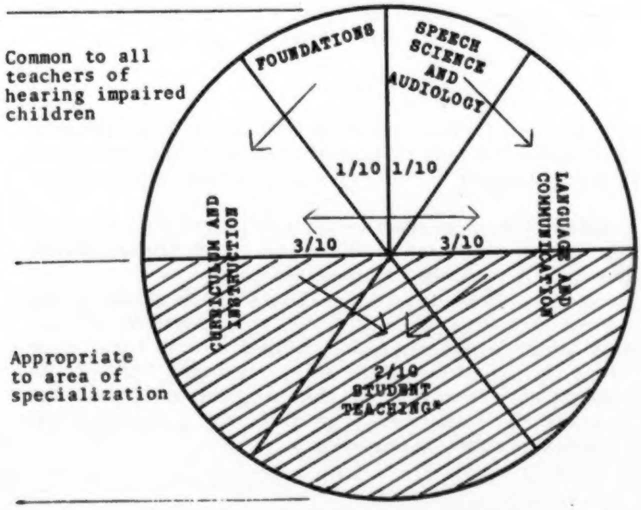
Prerequisite to specific preparation for teaching the hearing impaired in any of the areas of specialization, the candidate should show satisfactory evidence of college study demonstrating that he has a general knowledge of:

1. Child growth and development, learning theory, and general psychology;
2. The development, structure, and function of social institutions including the interaction and interrelationships of these groups in our society;
3. Current instructional procedures in general education;
4. Instructional procedures for the education of handicapped and multihandicapped children.

In addition, the applicant for certification in any area of specialization must have satisfactorily completed the equivalent of a minimum of twenty (20) semester hours in a major area of study directly related to his area of intended specialization.

Requirements for Provisional Certification

Each applicant for provisional certification as a teacher of hearing impaired children must complete a core program consisting of a minimum of thirty (30) semester hours or its equivalent at an approved preparation center (see Figure 1).



*Student Teaching: Total of 250 hours (minimum) at one or more levels

FIGURE 1.—Suggested credit hour allocations for provisional certification (minimum 30 semester hours).

Areas of preparation

FOUNDATIONS OF EDUCATION OF THE HEARING IMPAIRED

(a) Philosophical approaches to education of the hearing impaired
(b) Psychological characteristics of deaf and hard of hearing populations
(c) Social adaptation of the hearing impaired
(d) Historical background of the education of the hearing impaired
(e) Present and past trends, problems, and issues in the education of the hearing impaired

SPEECH SCIENCE AND AUDIOLOGY

Study of the physical characteristics of the speech and hearing mechanisms, the physical dimensions of sound, the psycho-acoustic aspects of sound, and the relationships among these areas.

LANGUAGE AND COMMUNICATION

Theoretical and practical aspects of the development, evaluation, and improvement of the hearing impaired child's receptive and expressive language and his communication skills.

CURRICULUM AND INSTRUCTION

Development and adaptation of curriculum materials and instructional procedures, including the use of media and instructional technology, to fit the special educational needs of hearing impaired children.

STUDENT TEACHING

Directed classroom and clinical teaching experience with hearing impaired students under the supervision of a practicum coordinator and/or a cooperating teacher for a minimum of 250 hours at one or more levels.

Practicum. Direct experiences with hearing impaired children and adults as a part of the course of study in all appropriate subject areas in addition to and including student teaching.

Internship practicum. For purposes of CED certification, credit for internship practicum experience may, at the discretion of college or university program sponsors, be granted in lieu of student teaching providing that the experience for such credit follows the completion of coursework required in the program and that the experience is not less than one full year of teaching hearing impaired children under qualified supervision.

REQUIREMENTS FOR PROFESSIONAL CERTIFICATION

Each applicant for professional certification must complete a minimum of twenty (20) additional semester hours beyond the provisional level and must complete a minimum of three years of teaching experience under the supervision of a professionally certified educator of the deaf.

Coursework to satisfy the requirement must be taken under the auspices of an approved center as a planned program of study related to an area of specialization and/or related to the general area of education of the hearing impaired. At least nine of these semester hours must be directly related to the education of hearing impaired children. The program may be planned in cooperation with the applicant's employer. Programs so planned may, at the option of the approved center, be partially implemented through work at other accredited colleges and universities (see Figure 2).

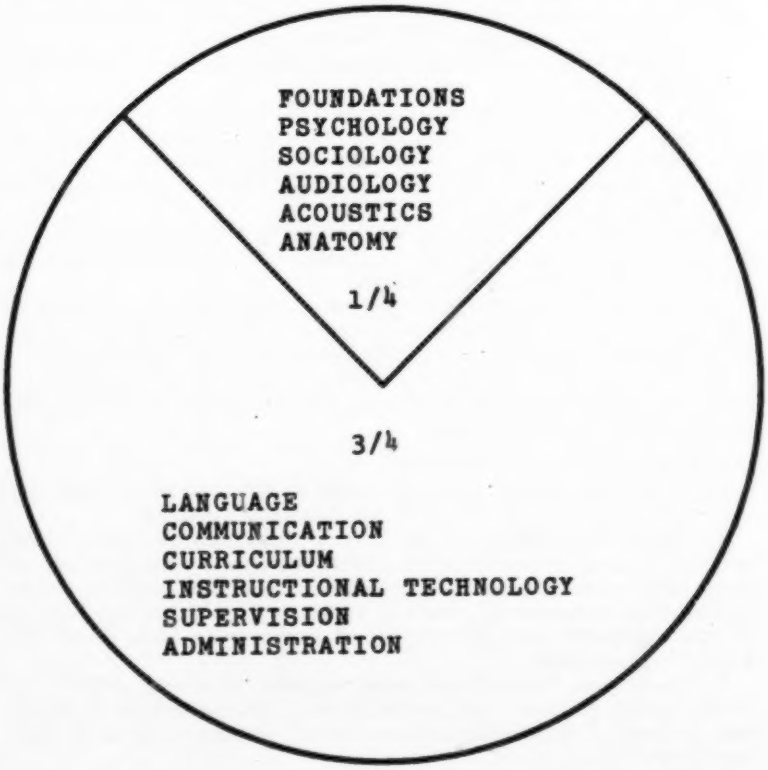


FIGURE 2.—Suggested credit hour allocations of advanced study for professional certification (minimum 20 semester hours).

Competencies and Knowledges for Provisional Certification

The following is a basic list of special competencies and knowledges in core areas which are considered fundamental for teachers to work effectively with hearing impaired children. It is recognized that the development and evaluation of these skills and knowledge is the responsibility of approved teacher preparation centers.

I. Foundations

The candidate must have:

A. A knowledge of historical and current developments in education of the hearing impaired in the United States and other countries and the influence of historical developments upon the current state of the field;

B. A knowledge of national and local issues, trends, and events which influence the education of hearing impaired children;

C. A knowledge of the purposes and services of national, state, and local organizations and government agencies concerned with the education and welfare of the hearing impaired;

D. A knowledge of national, regional, state, and local educational programs for the hearing impaired;

E. A knowledge of the content and nature, issues, and trends of fields and professions related to education of the hearing impaired, such as regular education, special education, audiology, and educational psychology, and the contributions of these fields to education of the hearing impaired;

F. A knowledge of the implications of hearing impairment for the psychological, sociological, vocational, and educational development of hearing impaired individuals;

G. The ability to utilize educational, sociological, audiological, and psychological information in educational planning and counseling for both hearing impaired children and their parents;

H. The ability to locate and utilize resources, reference materials, and professional literature in the education of the hearing impaired and in related fields.

II. Speech science and audiology

The candidate must have knowledge of the following areas and their relevance for education of the hearing impaired:

A. The human speech, auditory, and visual mechanisms and related brain and central nervous system structures; the anatomy of these mechanisms, their inter-relatedness, common pathologies affecting these mechanisms, and the functioning of these mechanisms in communicative and other types of behavior in both intact and defective organisms;

B. Production, transmission, and reception of speech sounds and other sounds; physical and psychophysical characteristics of sound; and methods of displaying and graphically representing these characteristics.

C. The general and specific effects of hearing impairment upon the production of speech and the reception of speech and other sounds;

D. Various procedures for testing hearing and interpretation of hearing test results;

E. The functioning and characteristics of various types of amplifying systems and their application to learning and instructional processes.

III. Language and communication

A. LANGUAGE

The candidate must have:

1. A knowledge of the structure of the English language (linguistics), the acquisition and use of language (psycholinguistics), and the implications of these areas for education of hearing impaired infants, children, and young adults;
2. A knowledge of research and other literature on language of the hearing impaired;
3. A knowledge of the acquisition and development of language skills in hearing and in hearing impaired infants and children;
4. A knowledge of disorders of language development;
5. A knowledge of commonly used methods and procedures of language instruction for hearing impaired children;
6. The ability to utilize appropriate instructional procedures to effect language learning in hearing impaired children and the ability to diagnose, correct, and improve language development in these children.

B. COMMUNICATION

The candidate must have:

1. A knowledge of the communication process and the effects of hearing loss on communication;
2. A knowledge of research and other literature on communication of the hearing impaired;
3. An understanding of various modes of communication and combination of modes used in teaching hearing impaired individuals (a. through h. below) and a knowledge of methods, procedures, and materials used in teaching these modes of communication including the use of techniques and materials appropriate to individuals or groups in the development, diagnosis, correction, and improvement of communication ability.
   - (a) Reading.
   - (b) Written communication.
   - (c) Speechreading.
   - (d) Auditory training.
   - (e) Speech.
   - (f) Fingerspelling.
   - (g) The language of signs.
   - (h) Other modes of communication.

IV. Curriculum and instruction

The candidate must have:

A. An understanding of the purpose and the nature of curriculum and an understanding of learning and instructional processes;

B. A knowledge of curriculum and instructional procedures common to education of the hearing impaired and regular education, adaptations of the regular curriculum and instruction for the hearing impaired, and aspects of curriculum and instruction unique to education of the hearing impaired;

C. The ability to plan, implement, and evaluate learning experiences for individuals and groups, including the ability to:

1. Identify learner entry level;
2. Conceptualize and formulate objectives in behavioral terms;
3. Design methods of evaluation based upon measurable objectives and utilize data collection procedures;
4. Select, design, produce, and utilize media, materials, and resources appropriate to learner behavior and lesson objectives;
5. Implement appropriate instructional procedures;
6. Evaluate learner responses and revise instruction appropriately.

V. Practicum

Through observation, participation, clinical practice, and student teaching, the candidate should have:

A. A knowledge of facilities, services, and programs available for the education and counseling of hearing impaired children and adults;

B. The ability to interact effectively for instructional purposes in a learning situation with hearing impaired individuals or groups at one or more teaching levels;

C. The ability to plan and organize curriculum content in an area of specialization for effective learning by both individuals and groups of hearing impaired children and youth.

CERTIFICATION

Two types of certificates for teachers of the hearing impaired may be earned. Each may be awarded under conditions specified below:

Provisional certification

This certificate is issued to applicants who have successfully completed the course and practicum work of the core curriculum for professional preparation as set forth under above Requirements for Provisional Certification and is predicated on the completion of at least a Bachelors degree. The basic certificate is good for a period of five years from date of issuance.

A provisional certificate may be renewed for an additional period of five years upon application and submission of:

A. Evidence of completion of six (6) semester hours applicable toward professional certification;

B. Evidence of completion of at least one year's teaching experience with hearing impaired children.

Professional certification

The professional certificate is issued to teachers who have:

A. Successfully completed the core curriculum for provisional certification;

B. Completed an additional program of advanced study of twenty (20) additional semester hours as described under Requirements for Professional Certification;

C. Completed three years of successful teaching experience under supervision of a qualified professionally certified educator of hearing impaired children.

The professional certificate

The professional certificate is valid for a period of five years from the date of issuance. The candidate for renewal of the certificate must submit evidence of having met at least one of the following conditions:

A. Successfully complete a minimum of three semester hours of course work in areas related to the candidate's field of specialization;

B. Taught the equivalent of a semester course in an area of special education in a college or university;

C. Participated as a panelist, speaker, or served on a committee involved with the program of an international, national, regional, or state convention related to special education;

D. Published in a professional journal.

Previously certified personnel

Teachers currently certified by the CEASD or the CED will upon application automatically receive professional certification under the newly inaugurated program. These standards will apply to all teachers seeking certification by CED as teachers of the hearing impaired.

EFFECTIVE DATE

These standards shall become effective two years from the date of final adoption by the Council on Education of the Deaf. The two-year period following adoption will be devoted to the development of application and program approval processes. All applicants seeking certification under previous CEASD or CED requirements must initiate an application prior to the effective date of the new requirements.

APPROVAL OF PROGRAMS

College or university programs previously reviewed and approved by the CEASD or the CED will continue to be recognized as approved programs by the CED. During the two-year period between the adoption and the effective date of these standards, the Committee on Professional Preparation and Certification will prepare revised program review procedures for new programs and prepare new periodic re-evaluation procedures for on-going and previously approved programs.

Approvals are granted by the CED based on an evaluation of program resources, curriculum, personnel, and practicum facilities. Invitations for program evaluation or re-evaluation may be initiated by a college or university, a department within a college or university, or a previously approved educational program directly affiliated with an accredited institution of higher education.

Previous agreements made between the *National Council for Accreditation of Teacher Education* (NCATE) and the Conference of Executives of American Schools for the Deaf (CEASD) for the review and approval of programs will, with consent of the NCATE, remain in force as the vehicle for approval of programs located in college or university teacher education centers normally reviewed by the NCATE.

THURSDAY, JULY 1—BUSINESS MEETING [1]

Dr. Kenneth R. Mangan, President, Presiding

Dr. MANGAN. We have the chairman of the Interpreters Committee as our leadoff interpreter this afternoon. I think we should express our appreciation to the interpreters who have worked so hard during the Convention, and particularly to Henry Bjorlie, who has for a couple of years now organized and checked and rechecked to be sure that they are on schedule, and so forth.

I would like to announce that the registration is 938. This was Convention members, and in addition to this there are 270 parents registered, so the total registration is well over 1,000.

Our first report this afternoon will be made by our Executive Secretary, Howard Quigley.

REPORT TO THE CONVENTION OF INSTRUCTORS OF AMERICAN SCHOOLS FOR THE DEAF

Howard M. Quigley, Executive Secretary, June 29, 1971

In my report to you in Berkeley I gave you the details of the events surrounding the establishment of a National Office for the Convention. In this report I shall take up a number of items which I hope will be of interest to you.

1. RELOCATION OF THE NATIONAL OFFICE

For several reasons the office will move soon after July 1 to quarters separate from the area now shared with the Educational Media Distribution Center. The Conference and Annals functions will also move. Fortunately, space is available in the same building so that the move will not be difficult. The rent will be about the same. There will need to be some adjustments in personnel.

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[1] In the interest of continuity, this second business meeting is incorporated at this point in the proceedings.

2. FINANCES

A statement of finances for the 23 months from July 1, 1969 to May 31, 1971 accompanies this report. An audited report for the full 24 months will be made available for the proceedings as soon as possible after July 1.

3. MEMBERSHIP

The membership total for 1971 to date is 4749. This is a substantial increase over previous years, and indicates a growing professional interest in the Convention. There is no clear distinction, of which we are aware, between the requirements for a regular and for an associate membership. I suggest that a membership committee be appointed to not only define membership qualifications, but also to study ways and means to obtain a larger number of members, since the potential is in the neighborhood of 8,000.

4. PARENT SECTION

Much work has been done during the past year to develop a program for the Parent Section, a group that held its first meeting in Berkeley, June 20–21, 1969, and which is reported in the 1969 PROCEEDINGS. The second meeting was held just prior to this convention.

5. MEDIA

As you all know, many items of media hardware and software have been provided schools and classes for the deaf during the past several years, by the Media Services and Captioned Films program. It has become increasingly evident that media and library materials have common purposes as learning tools, and perhaps should be administered in the schools as one unit. A section of this year's program is devoted to consideration of this topic.

6. NEWSLETTER

Three issues of the CAID Newsletter were published this past year. It is hoped that the publication can continue, on a scheduled basis, for it appears to supply a need for the classroom teachers. Contributions of articles have been good, but there are no doubt many excellent ideas not reported that can increase the value of this news sheet.

7. CAID BROCHURE

The supply of the attractive brochures that have been distributed in the past is almost exhausted. A new supply should be provided, which could use the same design or come up with another one.

8. INTERAGENCY REPORT

A report of the meeting held January 6, 1971 is attached. A reorganization of the Interagency Committee offers opportunity for more concentrated effort in behalf of handicapped persons.

9. CERTIFICATES OF MERIT

The CEASD–CAID joint certificate of award was presented to 111 persons since our office took over this activity last November. This program began in 1960, and to date 533 certificates have been issued. Forms for making application are available at any time to administrators who request them.

We in the National Office appreciate the assistance we have received from CAID officers and members. We welcome suggestions at any time and we hope that those of you visiting Washington will find time to visit us, or give us a call.

Dr. MANGAN. I think we know the reason the Convention has gone so well during the past few years has been due, in part, to Howard Quigley's efforts in Washington, and this will continue. We would now like to have the report of Secretary-Treasurer, Gerald Burstein.

SECRETARY-TREASURER'S REPORT

Gerald Burstein, California School for the Deaf, Riverside

Mr. Jerold M. Jordan, representing the auditing committee, has checked the books of CAID beginning with July 1, 1969, and concluding with May 31, 1971.

The accounts are in order and the bank balance has been verified. It is recommended that the reports be accepted. The official report by a qualified professional auditor will be made following the close of the fiscal year, June 30, 1971.

Dr. MANGAN. May we have a motion to accept the secretary-treasurer's report?

Mr. BRASEL. I so move.

Mr. SHIPMAN. Second the motion.

Dr. MANGAN. Any discussion. The question has been called. All in favor raise their hands. Opposed? It's carried.

PROFESSIONAL BUSINESS MANAGEMENT, INC.,
MID-ATLANTIC STATES,
Washington, D.C., November 9, 1971.

CONVENTION OF AMERICAN INSTRUCTORS OF THE DEAF,
5034 Wisconsin Avenue NW.,
Washington, D.C.

GENTLEMEN: At your request we have conducted an audit of the books and records of the Convention of American Instructors of the Deaf for the period of July 1, 1969 through June 30, 1970, and submit herewith the following statements:

Statement of receipts and disbursements, Exhibit A.

Statement of cash recapitulation, Exhibit B.

In our opinion the bookkeeping records have been kept in a neat and orderly manner and all entries have been made consistent with sound accounting principles.

Respectfully submitted,

WILLIAM E. POIST,
Consultant.

Enclosures.

CONVENTION OF AMERICAN INSTRUCTORS OF THE DEAF

Report of Receipts and Disbursemenst July 1, 1969 through June 30, 1970

Statement A

Receipts:	
Memberships:	
Regular	$35, 683. 00
Student	915. 00
Total	36, 598. 00
Interest	3, 036. 23
Royalties	12. 75
Proceeds from bi-annual convention	3, 147. 92
Sales of proceedings of bi-annual convention	150. 00
Overpayments received	33. 00
Payments for mailing list and postage	145. 29
Total receipts	43, 123. 19
Disbursements:	
Salaries and wages	$8, 619. 29
Taxes (unemployment)	158. 79
Rent	1, 010. 82
Office supplies and equipment	350. 06
Telephone, postage and express	786. 94
Travel	765. 40
Printing	1, 327. 19
Mailing list preparation	150. 86
Refunds	150. 83
Special services, recorder's fee, auditing	993. 45
Organization dues	675. 00
Subscriptions to "American Annals of Deaf" for members	18, 750. 00
Miscellaneous	25. 21
Total disbursements	33, 763. 84
Gain	9, 359. 35
Loan from Conference of Executives of American Schools for the Deaf	2, 500. 00
Closing balance June 30, 1970	69, 035. 40

Statement B

Opening balance July 1, 1969	58, 293. 28
Less outstanding checks	1, 593. 72
Plus interest earned but not credited prior to June 30, 1969	476. 49
Total	57, 176. 05
Additional: receipts	43, 123. 19
Total receipts	100, 299. 24
Disbursements	33, 763. 84
	66, 535. 40
Loan from Conference of Executives of American Schools for the Deaf	2, 500. 00
Closing balance June 30, 1970	69, 035. 40

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Respectfully submitted,

WILLIAM E. POIST,
Consultant.

Enclosures.

CONVENTION OF AMERICAN INSTRUCTORS OF THE DEAF

Report of Receipts and Disbursements July 1, 1970 through June 30, 1971

Statement A

Opening balance	$69, 035. 40
Receipts:	
Memberships:	
Regular (4,381)	43, 807. 02
Student (433)	2, 165. 00
Gifts	15. 00
Interest	3, 855. 37
Royalties	25. 79
Sales of Proceedings	187. 00
Certificate of Merit Fees	102. 63
Total Receipts	50, 157. 81
Disbursements:	
Contribution to teacher training and Certifying Commission	1, 061. 82
Salaries and related taxes	2, 549. 00
Special, consultant, and personnel services	8, 430. 59
Rent	970. 57
Office supplies and equipment	435. 55
Insurance	8. 90
Telephone, postage and freight	1, 634. 48
Travel	2, 944. 12
Printing	2, 008. 89
Magazine subscriptions for members	24, 690. 00
Refunds	104. 00
Repayment of loan from C.E.A.S.D.	2, 500. 00
Organization dues	675. 00
Advance to Arkansas School for meeting expense	500. 00
Plaques	53. 50
Safe deposit box	4. 50
Parents' Section consultant fee	1, 000. 00
Total Disbursements	49, 570. 92
Closing balance	69, 622. 29

STATEMENT B

Opening balance	69, 035. 40
Receipts	50, 157. 81
Total	119, 193. 21
Disbursements	49, 570. 92
Closing balance June 30, 1971	69, 622. 29

Dr. **MANGAN**. We will now have a report of the Council on Education of the Deaf board of directors. As you know, this is made up of three organizations, A. G. Bell, the Convention of Executives, and the Convention of American Instructors. One of our representatives is Jay Farman. He will give us the CED report.

REPORT ON COUNCIL ON EDUCATION OF THE DEAF

J. Jay Farman, New York State School for the Deaf, Rome

The three constituent organizations of the Council on Education of the Deaf (CED) are the Convention of American Instructors of the Deaf, the Conference of Executives of American Schools for the Deaf, and the Alexander Graham Bell Association for the Deaf. The representatives to the Executive Board of the CED from this organization are: Dr. Kenneth Mangan, Dr. Stanley Roth, Mr. Robert Tegeder, and myself.

The articles of corporation have been finalized and the CED is now responsible for the certification of teachers; a responsibility formerly assumed by the Conference.

The major work of the CED has been the development of proposed standards for the certification of teachers of the hearing impaired. Dr. Ralph Hoag, chairman of the Standards Committee, presented this document to you in a special report at the business meeting earlier this week.

I will not go into the survey results in depth, but I think you would be interested in some of the basic statistics. In the 1970–71 school year (from the 55 residential schools reporting) the number of teachers and educational supervisors ranged from 15 to 122 with a median educational staff size of 54. A median of 20 educational staff had CED certification in each of these schools which is less than 40 percent of the median staff size of 54. In September 1970 these 55 schools employed a range of from 2 to 27 new teachers, with the median being 9. Between 0 and 15 was the range for new teachers with CED certification. Nineteen residential schools employed no new teachers who had CED certification; 10 schools employed one new teacher with CED certification, and four schools employed two certified new teachers. Thus, in 55 residential schools only 1 out of every 9 teachers who were newly employed in September 1970 was eligible for certification by CED. In these 55 residential schools a total of 531 teachers and supervisors of the deaf were newly employed in September 1970 and 145 were eligible for CED certification. Therefore, 386 of these individuals were not certified nor fully prepared by CED standards.

There was a range of from 1 to 110 with a median staff size of 18 in the 134 day programs answering the questionnaire. The median number was 1 teacher with CED certification. The range of newly employed teachers in September 1970 in these classes was 0 to 23 with the median number of new teachers with CED certification was 0. The results also show that the 134 day programs employed 263 teachers in September 1970 of whom 43 were eligible for CED certification. Thus, 220 teachers and supervisors out of 263 newly employed for September 1970 were not recognized as "certified" or "fully certified" by the Council on Education of the Deaf.

The results of this survey would seem to make it exceedingly clear that there still exists a very great need for certified teachers of the deaf. Hopefully, these facts will also encourage those teachers in the nation's programs for teaching deaf children who are not certified to work for this achievement.

The CED feels that if the International Congress on Education of the Deaf is to be continued that it would be necessary to assume some responsibility without taking over. The suggestion has been made that the next meeting be held in Japan in 1975, but additional information is not yet available.

During the past school year meetings of the Executive Board of the CED were held in New York City in February, and again during the Convention in Little Rock.

Dr. MANGAN. We will now have a report of the Council of Organizations Serving the Deaf. In the absence of Dr. David Denton, the report will be read by Mr. Burstein.

REPORT OF THE COUNCIL OF ORGANIZATIONS SERVING THE DEAF

Dr. David M. Denton

As one of the CAID representatives on the Council of Organizations Serving the Deaf Board of Directors, I would like to give you a brief outline of Council activities during the past two years. Of foremost importance were the two COSD Forums.

On February 25, 26, 27, 1970, the Third National Forum, "The Deaf Man And The Law", was held in Chicago, Illinois. The Forum included the topics:

The Constitutional Rights of All People
The Legal Rights of the Deaf
Social Services and the Deaf Client
Insurance Problems of Deaf People
Recent Legislation Affecting the Deaf
Civil Law
Mock Trial

More than two hundred people attended this Forum. About 7,500 copies of the book containing the proceedings of "The Deaf Man and the Law" were sent to the COSD mailing list which includes more than 3,000 university and college libraries. In addition, a special mailing in excess of 300 copies was made to regional offices of the Office of Economic Opportunity. This government agency is responsible for guarding the legal rights of disadvantaged citizens.

On March 3, 4, 5, 1971, the Fourth National Forum, "Medical Aspects of Deafness", was held in Atlantic City, New Jersey. Chairman for this Forum was Mr. Gary Curtis. (Mr. Curtis is one of two members of the Board of Directors of the Council of Organizations Serving the Deaf, representing the Convention of American Instructors of the Deaf. The second representative is David M. Denton. Through its representatives, the CAID continues to remain deeply involved in the activities of the COSD. Two of the four COSD Forums have been shared by Board Members representing the CAID and both representatives of the CAID have served or are serving as officers of the Council.) This Forum, attended by over 250 people, focused on:

The Medical Profession's View

The Deaf Consumer's View
Prevention, Diagnosis and Habilitation
Roundtable on Prevention
Roundtable on Diagnosis
Roundtable on Habilitation

The proceedings book "Medical Aspects of Deafness" will be published in the near future.

Persons interested in receiving a copy of "The Deaf Man and the Law" or "Medical Aspects of Deafness", should contact the Council of Organizations Serving the Deaf.

From time to time, as the COSD Board directs, special sections and committees are activated to study and seek remedies for various problems in the field of deafness. Topics which are presently being considered under the context of section and committee study include:

Legal Rights of the Deaf Section
Religious Services for the Deaf Section
Higher Education for the Deaf Committee
Research Survey Committee

In addition to this activity, the COSD is currently coordinating activity to get the television industry to provide captioning and special programing for the twenty million hearing impaired Americans. Mr. Joseph Wiedenmayer, working as a Special Consultant to the COSD, was instrumental in promoting the Federal Communications Commission Public Notice, 70–1328, 56051, dated December 17, 1970, titled "THE USE OF TELECASTS TO INFORM AND ALERT VIEWERS WITH IMPAIRED HEARING". This Public Notice included recommendations in three areas where captions should be used:

(1) *Bulletins of an emergency nature* such as approaching tornadoes, windstorms, hazardous driving conditions, escaped convicts, industrial accidents, health hazards and other community dangers;

(2) *News programs* to include visual clues of the matter under discussion, weather maps to have descriptive phrases placed on them and that as far as possible, a segment of the screen should be reserved for the presentation of the face of the announcer so as to permit lipreading;

(3) *General programing* to include sports programs with the scoreboard frequently flashed on the screen, names of players or persons being pictured be presented in written form and broadcasts of movies be made with subtitles when films are available from the Media Services and Captioned Films Branch of the U.S. Office of Education;

(4) *Information programs* concerning the problems of the deaf and hard of hearing were also to be offered.

While the FCC notice was only a recommendation, it can become a ruling if television stations do not voluntarily supply captions. The COSD would like to be kept advised as to progress being made in your area regarding captioning. If local television stations are not providing emergency bulletins in captions, notify the COSD immediately. Anyone who wishes a copy of the FCC Notice or other background information can write to COSD for more data.

Strong editorial support through the LPF encouraging deaf persons, parents and other interested persons to write letters to local stations is solicited and would be a tremendous contribution to this important activity.

As a result of the tragic death of two Illinois School for the Deaf youths in a fire at the Chicago Hilton Hotel in 1970, the COSD is preparing a set of guidelines for hotel management and hearing impaired guests to follow for greater safety and convenience. The work of drafting these guidelines is being done by the COSD and preliminary discussions have been held with the staff of the American Association of Retired Persons in the hope this might be a joint effort.

In 1969, the Alexandria-Potomac Lions Club established the Helen Keller Memorial Fund for the Deaf. This Fund memorializes the internationally known deaf-blind personality who frequently stated more needed to be done for deaf people. This project was later unanimously adopted by District 24A as a District project. The Fund would enable COSD to continue its service to deafness, now temporarily and partially funded by the Department of Health, Education and Welfare. Members of Lions Clubs throughout the country are encouraged to promote the Helen Keller Memorial Fund for the Deaf as a project in their own area. More information about this Fund can be obtained by contacting the Council of Organizations Serving the Deaf.

There is a growing interest in beginning local or state type COSD organizations. The national COSD office has provided guidance to various groups around the nation in implementing such programs. Some of these organizations include:

Connecticut Council of Organizations Serving the Deaf
Council of Organizations Serving the Bay Area Deaf (San Francisco)
Kansas Roundtable of Organizations Serving the Deaf
New York City Council of Organizations Serving the Deaf
Greater Kansas City Advisory Council
Greater Los Angeles Council on Deafness
St. Louis Roundtable of Organizations Serving the Deaf

Several other such organizations are now in the formative stage. For guidance in establishing local and state COSD's contact the national COSD office.

In efforts to increase the amount of feedback from organizations serving the deaf and to improve the utilization of all available resources to serve deaf persons in our country, the National Advisory Committee on Education of the Deaf arranged for a meeting with representatives from the member organizations of the Council of Organizations Serving the Deaf. This meeting was held in January 1971, in New Orleans.

The meeting clearly accomplished the prime objective of establishing lines of communication between the NACED and the COSD. It was generally understood that hereafter this would be a two way communication with input from the grassroots level of the national deaf community to the NACED which, in turn, would more frequently and fully disseminate information about its activities, both on-going and anticipated. The hoped-for end result of this cooperative effort is improved utilization of all available resources to serve deaf persons.

The general feeling is that a good beginning has been made and hopefully this was the first of a continuing series of mutually beneficial working relationships between the two groups.

In the summer of 1970, Mr. Mervin Garretson resigned as Executive Director of the COSD to accept a position as Principal of the Model Secondary School for the Deaf. In October, Mr. Edward Carney was hired as the new Executive Director. Mr. Alfred Cranwill remain as Assistant Director and in April, Mrs. Mary Jane Rhodes came to the COSD to become Assistant to the Director. Miss Joy York is employed as Administrative Secretary and Miss Sharon Wilson is bookkeeper-typist.

With Mr. Carney's resignation as President of the COSD, Mr. Emil Ladner became acting President. At the Atlantic City Board Meeting, Dr. David M. Denton was chosen as President-Elect. On June 11 and 12, I attended the Planning Committee Meeting for the Fifth National Forum, "Perspectives in Education of the Deaf". This Forum will be held on March 1, 2, 3, 1972, at the Rivermont Holiday Inn in Memphis, Tennessee. The 1972 Forum promises to be the most innovative and exciting meeting ever held on education of the deaf. Everyone is invited and urged to attend. This will be an open forum where deaf people, educators, parents, vocational rehabilitation counselors, religious workers, professionals and the general public are invited to participate and share their ideas and suggestions on how education of the deaf in America can be improved. The topic of the 1973 Forum, "The Deaf Child and His Family", will be a fitting follow-up on "Perspectives in Education of the Deaf". The probable site for the 1973 Forum will be the Washington-Metropolitan Area.

As in the past, the COSD continues to serve all deaf people in the nation by:

(a) Striving to eliminate social and economic barriers which handicap deaf persons;

(b) Supporting activity directed to the prevention of deafness;

(c) Coordinating and strengthening the services of its member organizations;

(d) Providing liaison between organizations for the deaf and other organizations interested in the deaf and their problems;

(e) Facilitating the sharing of information about deafness and the welfare of the deaf, and providing general information about deafness;

(f) Enlisting the support of organizations and of the general public in developing economic, social, cultural, and other opportunities for deaf persons;

(g) Seeking funds for the accomplishment of these purposes.

Approximately one half of all inquiries received at the COSD office are related to education of the deaf and requests for information about careers in education of the deaf. The COSD cooperates with the CAID home office in supplying this information and has a close working relationship with Dr. Howard Quigley.

In the words of Dr. Boyce R. Williams: "The Council of Organizations Serving the Deaf . . . brings together in common purpose all of the major organizations that are of or for deaf people. The early years of the Council indicate it is well conceived, serving an invaluable function, providing leadership and focus from which a stream of positive thinking and of group advancement springs. It is needed and appreciated."

If you should wish to support the work of the COSD, several classifications of membership are available—ranging from Individual Membership at $5 per year to the Gold Emblem Club, which is a pledge to pay $1,000 over a ten-year period. Any contribution is tax deductible.

The Council of Organizations Serving the Deaf deserves your individual as well as your organizational support.

Dr. Mangan. We will now hear from the editor of the *News Letter*, Jim Kirkley.

REPORT OF THE EDITOR OF THE NEWS LETTER

James R. Kirkley, Colorado School

I don't know what you are expecting here, but I have very, very little to say. I can assure you that it will be about as brief a report as will be made.

I would first of all like to compliment the man who has done the work on the *News Letter*. This is none other than Mr. Howard Quigley, who is responsible for the design of the format of the *News Letter*. I am sure you are aware that this is one of the changes made. The organization, the mailing and all is the responsibility of his office. I had very little to do with it.

I would like to express my appreciation to the others who did the work, and these are the contributors of the copy for the *News Letter*. You may have noticed that most of this copy came from a few schools. I would like to encourage those schools that do have interesting projects and activities going on to contribute to the *News Letter*. If the *News Letter* serves any valuable purpose it must depend upon the contributors for copy regarding the projects and activities of your school. In the past superintendents have appointed a representative to see that copy is forthcoming, and I would like to ask that this be done again; that superintendents appoint someone, and that the appointee take time, at least, to see that the copy is contributed. It is your *News Letter*. It will depend upon you to supply the information that is to be disseminated via this *News Letter*.

Dr. Mangan. Thank you very much, Mr. Kirkley. We now come to a very important aspect of our Convention, which is the taking note of the people who are no longer with us in the profession. The Necrology Committee has been headed again by Miss Pauline Shahan of Gallaudet College.

NECROLOGY REPORT

Pauline Shahan, Gallaudet College

Name	Born	Died	Address
Barker, Delores	June 30, 1934	June 29, 1970	University of Oklahoma Medical Center School for the Deaf, Oklahoma City.
Benson, Cecily	Apr. 8, 1895	April 1969	Pennsylvania School for the Deaf, Philadelphia.
Best, Dr. Harry	1881	Feb. 23, 1971	Lexington, Ky. (Alabama, Nebraska and Washington State Schools for the Deaf and the New York Institution for Instruction of the Deaf).
Blanchard, Leverett O.	Aug. 27, 1909	Mar. 14, 1971	American School for the Deaf, West Hartford, Conn.
Bovard, Wilber E.	July 26, 1907	April 1970	Colorado School for the Deaf and the Blind, Colorado Springs.
Brady, Ruth		July 1970	Bruce Street School, Newark, N.J.
Broadbent, Martha	Apr. 19, 1889		Pennsylvania School for the Deaf, Philadelphia
Cantrall, Mrs. Ruth A.	May 23, 1905	June 28, 1970	Kansas School for the Deaf, Olathe.
Cleveland, Mrs. Dorothy	Mar. 6, 1910	Sept. 9, 1969	Alabama Institute for Deaf and Blind, Talladega.
Crouter, John Yale		April 1971	Rhode Island School for the Deaf, Providence.
Curtiss, Louise A.	Sept. 8, 1873	Jan. 6, 1970	Kansas School for the Deaf, Olathe.
Cuscaden, Mrs. Nellie Johnson	1890	Aug. 17, 1969	Nebraska School for the Deaf, Omaha.
Davidson, Mrs. Anna	June 30, 1909	Mar. 15, 1971	Ontario School for the Deaf, Belleville, Canada.
DenAroma, Mrs. Geraldine Ball	Aug. 15, 1941	Nov. 2, 1970	American School for the Deaf, West Hartford, Conn.
Edmondson, William Ridley	Mar. 17, 1896	Sep. 2, 1970	The Governor Morehead School, Raleigh, N.C.
Evans, Louise N.	Aug. 10, 1945	Aug. 6, 1970	The Southwest School for the Hearing-Impaired, Lawndale, Calif.
Farquhar, Dr. Grover C.	Nov. 29, 1882	Jan. 5, 1971	Missouri School for the Deaf, Fulton.
Fisher, Mrs. Ida Florence	Aug. 9, 1891	Nov. 14, 1970	Alabama Institute for Deaf and Blind, Talladega.
Folsom, Mrs. Marion J.	May 8, 1916	May 22, 1971	Minnesota School for the Deaf, Faribault.
Fowler, Amy	Oct. 31, 1891	Dec. 29, 1969	Indiana School for the Deaf, Indianapolis.
Gallen, Harry	July 2, 1902	Aug. 20, 1965	Pennsylvania School for the Deaf, Philadelphia.
Golden, Nannie	Mar. 18, 1890	Dec. 18, 1969	Alabama Institute for Deaf and Blind, Talladega.
Gordon, Ann	January 1909	Sep. 16, 1970	The Willis, Marie H. Katzenbach and Bruce Street schools in New Jersey, and California School for the Deaf, Berkeley.
Green, Marion Bolton	June 30, 1907	Apr. 24, 1971	Tennessee School for the Deaf, Knoxville.
Greenmun, Robert M.	1913	Apr. 12, 1970	Florida School for the Deaf and the Blind, St. Augustine.
Harms, John	1901	Dec. 12, 1970	Marie H. Katzenbach School for the Deaf, West Trenton, N.J.
Harris, John D.	Oct. 3, 1923	Aug. 6, 1969	The Governor Morehead School, Raleigh, N.C.
Heintschel, Barney O.	May 13, 1910	Apr. 1970	Texas School for the Deaf, Austin.
Hilliard, Ethel M.	Jan. 1, 1880	Nov. 15, 1970	Marie H. Katzenback School for the Deaf, West Trenton, N.J.
Humphreys, Evelyn	Feb. 18, 1881	Oct. 16, 1969	Missouri School for the Deaf, Fulton.
Ingle, Helen Fulkerson		Dec. 23, 1970	Long Beach, Calif. (Western Pennsylvania School, Pittsburgh; California School, Berkeley; day schools in Marionette, Wis., Dayton, Ohio, Los Angeles and Pasadena, Calif.).
Jones, Evelyn McMullan	Feb. 6, 1909	Feb. 27, 1971	Tennessee School for the Deaf, Knoxville.
Kennedy, Mary	Dec. 12, 1881	Nov. 19, 1968	Kentucky School for the Deaf, Danville.
Kerr, Elizabeth	1877	Feb. 14, 1971	Missouri School for the Deaf, Fulton.
King, John Sr.	1902	Feb. 11, 1970	New Mexico School for the Deaf, Santa Fe.
Kuhn, Mary L. T.	June 13, 1929	Feb. 11, 1970	Tri-County Center Inc. for Pre-School Hearing and Speech Impaired Children, Bay City, Mich.
LaFontaine, Lewis Claude	Mar. 28, 1898	Oct. 7, 1970	Ohio School for the Deaf, Columbus.
Landers, Addie	Nov. 1, 1891	June 26, 1969	Governor Baxter State School for the Deaf, Portland, Maine.
Lapides, Michael	1897	June 1, 1969	California School for the Deaf, Berkeley.
Larsen, Martha	Nov. 11, 1909	Apr. 30, 1970	Indiana School for the Deaf Indianapolis.
Long, Florence		Mar. 9, 1971	West Virginia School for the Deaf and the Blind, Romney.
McCarty, Beale G.	Oct. 10, 1909	Aug. 12, 1969	Oklahoma School for the Deaf, Sulphur.
McConnell, Ruth A.		Nov. 7, 1969	Willis and Elizabeth Martin Public School, Philadelphia, Pa.
McDevitt, Mary	June 30, 1901	1971	Pennsylvania School for the Deaf, Philadelphia.
McGarry, Mrs. Esther Solheim			California School for the Deaf, Riverside.
McVan, Alice Jane		Sept. 2, 1970	St. Mary's School for the Deaf, Buffalo, N.Y.
Marbut, Musa	1883	January 1971	Marie H. Katzenbach School for the Deaf, West Trenton, N.J.
Marsh, Charles E.	May 30, 1915	Oct. 11, 1970	Arizona State School for the Deaf and the Blind, Tucson.
Martin, Ashland D.	1890	June, 1968	Kentucky School for the Deaf, Danville.
Martin, James			California School for the Deaf, Riverside.
Mengert, Ida Gaarder	1885	Apr. 1, 1970	Kendall School for the Deaf, Washington, D.C.
Michaelson, Edward L.		July 29, 1968	Iowa School for the Deaf, Council Bluffs.
Miller, Lillian Lee	Oct. 18, 1894	Dec. 27, 1966	Kentucky School for the Deaf, Danville.
Olmsted, Jane Young	1881	Oct. 19, 1970	Central Institute for the Deaf, St. Louis, Mo.
Panzer, A. M.		Feb. 24, 1971	West Virginia School for the Deaf and the Blind, Romney.

NECROLOGY REPORT—Continued

Pauline Shahan, Gallaudet College—Continued

Name	Born	Died	Address
Patrick, Annie L.	May 9, 1873	May 7, 1970	Governor Baxter State School for the Deaf, Portland, Maine.
Pugh, Bessie	1898	June 12, 1970	Florida School for the Deaf and the Blind, St. Augustine.
Roche, Mary	Sept. 25, 1882	1971	Pennsylvania School for the Deaf, Philadelphia.
Rushford, Georgina M.	May 23, 1926	Feb. 17, 1970	John Tracy Clinic, Los Angeles, Calif.
Schmidt, Mary	Sept. 20, 1884	Nov. 18, 1969	Missouri School for the Deaf, Fulton.
Sheehan, Mrs. Alma K.	Jan. 14, 1906	Dec. 6, 1970	Virginia School for the Deaf and the Blind, Staunton.
Smith, Annette	May 22, 1894	Aug. 28, 1970	Oregon School for the Deaf, Salem.
Spitze, Mrs. Jean	Jan. 10, 1925	Aug. 24, 1969	Missouri School for the Deaf, Fulton.
Stahlem, Mrs. Evelyn McInnes	May 14, 1906	Mar. 1, 1971	Mary E. Bennett School for the Deaf, Los Angeles, Calif.
Stark, J. Harold		Jan. 19, 1970	Illinois School for the Deaf, Jacksonville.
Stevenson, Mrs. Edith Long	1893	Oct. 30, 1969	California School for the Deaf, Berkeley.
Stoner, Marguerite	Sept. 5, 1913	Sept. 2, 1970	John Tracy Clinic, Los Angeles, Calif.
Temple, Sara Small	1880	Dec. 25, 1968	Marie H. Katzenbach School for the Deaf, West Trenton, N.J.
Timberlake, Josephine	1889	June 13, 1969	Virginia School for the Deaf and the Blind, Staunton; Primary Day School, Bethesda, Md.
Underhill, Irma	Feb. 10, 1896		Pennsylvania School for the Deaf, Philadelphia.
Vollette, Mrs. Gertrude	Sept. 20, 1898	October 1970	Texas School for the Deaf, Austin.
Wartenberg, Rudolf		1969	California School for the Deaf, Berkeley.
Waters, Florence A.		1969	Gallaudet College, Washington, D.C.
Welch, Mary Rowland	Feb. 22, 1879	July 21, 1968	Kentucky School for the Deaf, Danville.
Wetherill, Mrs. Stella	Mar. 31, 1877	Mar. 26, 1969	Missouri School for the Deaf, Fulton.
Why, Jane	June 19, 1896	June 4, 1969	Pennsylvania School for the Deaf, Philadelphia.
Wogenstahl, Mrs. Dorothy Smith	Apr. 9, 1898	Nov. 15, 1970	The Alexander Graham Bell School, Cleveland, Ohio.
Wood, Mrs. Jessie	Sept. 29, 1899	Dec. 13, 1969	Alabama Institute for Deaf and Blind, Talladega.
Woodburn, Elizabeth H.	May 28, 1895	Feb. 2, 1971	Arizona State School for the Deaf and the Blind, Tucson.
Yates, Mrs. Margaret Clack	Sept. 22, 1922	Nov. 30, 1969	Maryland School for the Deaf, Frederick.

Dr. MANGAN. Thank you very much. We will now hear from the Resolutions Committee, headed by Mr. Lloyd Parks of the Kansas School.

REPORT OF THE RESOLUTIONS COMMITTEE

Lloyd R. Parks, Kansas School for the Deaf

Mr. President, members of the Convention of the American Instructors of the Deaf: The Resolutions Committee of the American Instructors of the Deaf, meeting at the Arkansas School for the Deaf in Little Rock, Arkansas, June 27 to July 2, 1971, respectfully submits the following report. The members of this committee are as follows:

Mr. Gordon Harland, principal, Arizona State School for the Deaf and Blind, Tucson, Ariz.
Mr. Tony Christopulos, principal, The Utah School for the Deaf and Blind, Ogden, Utah
Mr. Rance Henderson, superintendent, North Carolina School for the Deaf, Morganton, N.C.
Mrs. Lois Kidd, instructor, The Arkansas School for the Deaf, Little Rock, Ark.
Mr. Wayne York, instructor, The Arkansas School for the Deaf, Little Rock, Ark.
Mr. Lloyd R. Parks, principal, The Kansas School for the Deaf, Olathe, Kans. (Chairman)

RESOLUTION NO. I

Being privileged to have held the forty-fifth meeting of the Convention of the American Instructors of the Deaf on the Campus of the Arkansas School for the Deaf: be it

Resolved, That the members attending this convention express through this resolution, their most sincere appreciation for the use of these excellent facilities to the Honorable Dale Bumpers, Governor of the State of Arkansas, and to the members of the Board of the Arkansas School for the Deaf.

Mr. Parks. Mr. President, I move the adoption of this resolution.

Mr. Brasel. Second the motion.

Dr. Mangan. Those in favor raise their hands. Opposed? Carried.

Mr. Parks. I will ask Mr. Christopulos to read Resolutions II and III.

RESOLUTION NO. II

Being aware of the unlimited time and effort necessary in making plans for this excellent convention: be it

Resolved, That the members attending this convention express through this resolution, our most sincere appreciation to Superintendent and Mrs. Roy G. Parks, Assistant Superintendent and Mrs. Morris Rickel, the staff, and students of the Arkansas School for the Deaf; Mr. J. M. Woolly, Superintendent of the Arkansas School for the Blind and his staff; Mayor George E. Wimberly; Little Rock Convention Bureau; A. W. Ford, Commissioner of Education; Right Reverend Christoph Keller, Jr.; News Media; Colonel Carl Miller and Robert Shivers of the Arkansas Livestock Exposition; Sam Harris, Director of Public Affairs for the *Arkansas Gazette*; Dr. Robert L. Henry; Mary L. Podhasky, Sheraton Motor Inn; and those who entertained at the various convention functions and to all others who contributed to the arrangements for the success of the convention, also for the complete comfort and convenience of the members and guests attending.

Mr. Christopulos. Mr. President, I move the adoption of this resolution.

Mr. Shinpaugh. Second the motion.

Dr. Mangan. Any discussion? Those in favor raise their hands. Opposed? Carried.

RESOLUTION NO. III

Be it *Resolved*, That appreciation be extended to Dr. Kenneth Mangan, Convention President, and Superintendent of the Illinois School for the Deaf and his officers for outstanding leadership of the American Instructors of the Deaf.

That appreciation be extended to Mr. Jack Brady, Program Chairman, Superintendent of the Kentucky School for the Deaf; and Dr. Howard Quigley, Executive Secretary of the Convention; and section leaders for the excellent organization of the programs.

That thanks be extended to assigned interpreters who graciously give of their time to make the proceedings more valuable for those being auditorily impaired.

Resolved, That the Convention of American Instructors of the Deaf extends its thanks and gratitude to Dr. Ralph L. Hoag, Chairman of the Council on Education of the Deaf Committee on Professional Preparation and Certification of Teachers.

Mr. CHRISTOPULOS. Mr. President, I move the adoption of this resolution.

Mr. ESTERLINE. Second the motion.

Dr. MANGAN. Any discussion. All in favor raise their hands. Opposed, same sign? Carried.

Mr. PARKS. Mr. Rance Henderson will read Resolution No. IV.

RESOLUTION NO. IV

Whereas Media Services and Captioned Films has acquired and widely distributed a great array of instructional materials; and

Whereas this program has provided basic audiovisual equipment to virtually every classroom in schools and classes for the deaf across the Nation; and

Whereas Media Services and Captioned Films through and with the Regional Media Centers for the Deaf and other projects has produced a variety of instructional media; and

Whereas Media Services and Captioned Films has researched and evaluated applications of instructional media and educational technology; and

Whereas Media Services and Captioned Films through the Regional Media Centers for the Deaf has trained large numbers of people to effectively use the aforementioned media and technology; and

Whereas Media Services and Captioned Films has shown great sensitivity to the needs of deaf children and opinions of educators of the deaf; and

Whereas Media Services and Captioned Films has recognized and utilized the talents of deaf people, which included some forty deaf persons employed on staff or in projects, and a deaf man as Assistant Chief; and

Whereas the Media Services and Captioned Films Branch continues to provide current educational, cultural and recreational opportunities to the deaf through the medium of Captioned Films; and

Whereas the aforementioned activities have significantly reduced the handicapping nature of a hearing impairment: be it

Resolved, That this Convention make known to Media Services and Captioned Films its deepest gratitude for these efforts with special expression of appreciation to Dr. Edwin Martin, Jr., Associate Commissioner, Bureau of Education for the Handicapped; Dr. Frank B. Withrow, Director, Division of Educational Services; Dr. Gilbert Delgado, Chief, Media Services and Captioned Films; and Mr. Malcolm J. Norwood, Assistant Chief, Media Services and Captioned Films.

Mr. Henderson. Mr. President, I move the adoption of this resolution.

Dr. Mangan. Any discussion? All in favor? Opposed? Carried.

Mr. Parks. Mr. Gordon Harland will read Resolution No. V.

RESOLUTION NO. V

Whereas the need for information on the National level on hearing impairments and other handicapping conditions has been expressed by various organizations and individuals concerned, and

Whereas the lack of data on hearing impairments has been discussed, and

Whereas the Office of Demographic Studies of Gallaudet College has initiated the Annual Census of Hearing Impaired Children which has received widespread acceptance. Also, said information is being made readily available Nationally by the Office of Demographic Studies.

Therefore be it Resolved, That the Convention of the American Instructors of the Deaf urge the Office of Education, Bureau of Education of the Handicapped and Gallaudet College to continue the Annual Survey of Hearing Impaired Children on a permanent basis.

Mr. Harland. Mr. President, I move the adoption of this resolution.

Mr. Huff. Second the motion.

Dr. Mangan. Any discussion? All in favor raise their hands. Opposed? Carried.

RESOLUTION NO. VI

Whereas, the Convention of American Instructors of the Deaf have served the educational needs and welfare needs of the deaf; and

Whereas, the Convention of American Instructors recognizes the need for parent involvement to better serve the needs of the deaf; and

Whereas, educators and parents have the same goal for improving all aspects of education for deaf children; and

Whereas, a cooperative effort in promoting all programs for the deaf will improve educational opportunities; and

Whereas, the Parents Association has adopted bylaws establishing aims, organization, and financial responsibility: therefore

Resolved, That the Convention of American Instructors of the Deaf welcome the Parents Association as an affiliate: further be it

Resolved, That the Convention of American Instructors of the Deaf cannot assume responsibility for bylaws, organization and financial responsibilities adopted by the Parents Association: therefore be it

Resolved, The Convention of American Instructors of the Deaf will cooperate fully in securing a harmonious union of all parents, professionals and organizations interested in promoting the education and general welfare of all deaf children.

Mr. Parks. I move the adoption of this resolution.

Mr. Graunke. I second the motion.

Dr. Mangan. Those in favor raise your right hands. Opposed? Carried.

RESOLUTION NO. VII

Approval of CED Standards for the Preparation of Teachers of the Deaf

The appointed Committee on Professional Preparation and Certification of the Council on Education of the Deaf has worked during the two-year period since the formation of this Committee in July, 1969, on the revision of standards adopted from The Conference of Executives of American Schools for the Deaf.

Whereas, several drafts of proposed standards have been reviewed, questioned, and discussed by groups and individuals representing interests in and for the Alexander Graham Bell Association of the Deaf, The Conference of Executives of American Schools for the Deaf, and The Convention of American Instructors of the Deaf and

Whereas, the three major open discussion meetings that were held during 1970 provided the opportunity for state directors of special education, teacher educators in institutions of higher education, teachers of the deaf, administrators of schools and programs for the deaf, the deaf, and parents of deaf children to react, comment, and offer suggestions to the Committee, and

Whereas, the Executive Board of the Council on Education of the Deaf reviewed the contents of proposed standards at its meeting in New York City in February of 1971 and approved, "in principle," the draft submitted by the Committee with the suggestion that, after final editing, the revised document be presented to the three respective member organizations for review and approval,

Therefore, be it Resolved, That the June, 1971, draft of proposed standards be accepted (subject to resolution of issues that may be voted by the membership at

> this meeting) by The Convention of American Instructors of the Deaf and that the representatives of the *Convention* on the Executive Board of the Council on Education of the Deaf be instructed and authorized to formally adopt these standards at its next meeting.

Mr. Parks. I move the adoption of this resolution.

Mr. Stelle. Second the motion.

Dr. Mangan. Any discussion? Those in favor raise their hands. Opposed? It is carried.

Mr. Parks. I want to take this opportunity to express my sincere appreciation to the members of my committee who have done all the work.

Dr. Mangan. Thank you, Lloyd. The last item is to see if there are any invitations for the 1975 Convention, and Rance Henderson has asked to make a statement.

Mr. Henderson. Mr. President, members of the Convention of the American Instructors of the Deaf—You are cordially invited to hold your 1975 meeting in Morganton, North Carolina, at the North Carolina School for the Deaf. This invitation is extended by the Governor of North Carolina; the Board of Directors of the North Carolina School for the Deaf; the President of the North Carolina Association for the Deaf; the Mayor of the City of Morganton; the Burke County Chamber of Commerce, and the staff of the North Carolina School for the Deaf. All of these people promise you a profitable and enjoyable time should you decide on North Carolina.

Dr. Mangan. Are there other invitations to be extended at this time? We have an invitation from the Atlantic City Chamber of Commerce. This is somewhat different from the usual pattern of holding Conventions. This will be turned over to the incoming officers and the Executive Committee, and the decision regarding the place of the 1975 Convention will be made and probably announced relatively soon. Is there any other business to come before the Convention?

Mr. Clatterbuck. I have a motion I would like to make. I move that the President of CAID be encouraged to appoint classroom teachers as section leaders and program participants.

Dr. Mangan. Is there a second to that? It is seconded by Mr. Brady. Any discussion? All those in favor raise their right hands. Opposed? It is carried. Anything else? It has been moved and seconded that we adjourn. All in favor. Opposed? The Convention is adjourned.

MEETING OF THE NEWLY ELECTED EXECUTIVE COMMITTEE

Berkeley, California, June 25, 1969

Present: Dr. Kenneth Mangan, Dr. M. B. Clatterbuck, Dr. Armin Turechek, Dr. Howard Quigley, Mr. Jack Brady, Mr. Paul Bird, Mr. Gerald Burstein.

The meeting was called to order by the newly elected president of the Convention of American Instructors of the Deaf, Dr. Kenneth Mangan. He told the new Executive Committee that there were several items that needed discussion and one or two that needed immediate attention and action.

CAID Budget

Dr. Mangan asked Howard Quigley for his comments on the budget. Dr. Quigley reported that the proposed budget was nearly the same as the previous two-year budget except for a few possible additional expenses. He reported that sometime soon it was going to be necessary to divide the Captioned Films activities from the national office of The Convention of American Instructors of the Deaf and the Conference of Executives of American Schools for the Deaf. He reported that the second year budget might have to be entirely different and that he and Dr. Mangan would like to recommend that the Executive Committee approve the budget with an additional motion that the President and the Executive Secretary of CAID be empowered to make modifications and not have to stay within the budget on a line to line basis on each item if they did not exceed the total budget.

Dr. Clatterbuck, past President, reminded the new committee that this is only the second budget of this kind and that it is impossible to predict what will happen and be needed in the next two years. It was his recommendation that the above method would be the only feasible way to manage the budget. After further discussion by the committee, Dr. Clatterbuck made the following motion:

"I move that the budget be adopted with the approval of the Executive Committee for the President and the Executive Secretary to adjust it as needed and not be bound to line by line items." Jack Brady seconded the motion. A unanimous vote was then taken.

The New Responsibility of the Convention of American Instructors of the Deaf in the Management of the American Annals of the Deaf

Annals of the Deaf

The president of CAID and three other members are to form the committee to represent the membership of CAID on the newly formed Joint Annals Administrative Committee. At this time, this would be Dr. Kenneth Mangan, Dr. Lloyd Graunke, Dr. Roy Stelle, with one appointment to be made by the President to replace Dr. Sam Craig. Recommendations for possible people to consider were asked for by Dr. Mangan. After some discussion, Dr. Mangan made the decision to wait a few weeks to make the appointment. He asked the members of the Executive Committee to give this consideration and write to him later with nominations.

Hospitalization and Retirement Benefits to Employees of CAID, CEASD, and the Annals

Dr. Quigley presently has a firm in Washington working out a plan. They will be able to determine how much each organization will have to contribute. After discussion it was decided that action could not be taken on this at the present time so a vote was taken to defer this item.

THE CREATION OF AN ADVISORY COMMITTEE FOR THE EXECUTIVE SECRETARY

Dr. Quigley feels that it is necessary to have two or three people who will sit down with him and give him their ideas on decisions he has to make. This Committee would also be asked to periodically "check up" on the activities of the national office and the Executive Committee in the interest of the entire membership of the CAID.

There was discussion of possible candidates for this committee and Dr. Mangan asked the Executive Board if it was decided to have this committee, would he be authorized to appoint such a committee. It was decided that before any decisions were made, Dr. Howard Quigley should outline on paper what he wants this committee to do. No one would want to accept such an appointment without knowing what was expected of him.

NEWSLETTER

Dr. Mangan commented on the needs and growth of the present Newsletter. He remarked that it has become more formalized the past year and that everyone seemed to think it should be continued. The time seems to have come, however, to establish definite guidelines on the publishing of it. It has been suggested that an editor be appointed plus getting more people involved in its production. Dr. Mangan asked for the Executive Committee's reactions. Discussion followed with many ideas discussed, but none finalized or voted upon. Regarding content, it was suggested that the Newsletter should be responsible for keeping the CAID membership informed of current legislation, it should contain a bibliography to bring interesting articles and books to the attention of the CAID membership, and should contain current announcements. It was determined that teachers should be urged and actually "pushed" to contribute articles to the Newsletter. It is known that teachers do create new techniques and have new ideas and these should be shared with others. It was suggested that each *Executive Committee member make it his responsibility to send something into the Newsletter that has been written by a teacher*. The first issue should be a strong appeal to teachers to contribute. Dr. Mangan concluded the discussion of the Newsletter with the request for names of people to ask to serve on the staff and with a promise to the Committee that he would continue to work on this.

STUDY ABROAD

Dr. Mangan next told of the contact made to him by Study Abroad to offer special tours, etc. in connection with the International Congress on Education of the Deaf in Sweden in 1970. This was discussed and it was pointed out that the Alexander Graham Bell Association and the Conference of Executives are already working in this area to provide tours, group rates, etc. It was decided that this area is being covered sufficiently and there is no room or need for a third group to become involved. Dr. Clatterbuck made a motion that the CAID stay out of the tour business and the motion was seconded. A unanimous vote was then taken that CAID would not provide tours.

Methods of Increasing Membership of CAID

Various methods were discussed to entice teachers to join CAID. The Executive Committee was urged to further develop ideas and present them to the President. Dr. Mangan asked that the members of the Committee keep in contact with him on all matters pertaining to CAID. He expressed the hope they would write or contact him and not just wait until he sends a letter or ballot and asks them for help.

Last to be considered was where and when the Executive Committee would meet in 1970. There was discussion as to whether a meeting should be held at the Conference of Executive meeting in St. Augustine or at the Alexander Graham Bell Association meeting in Philadelphia. It was time to adjourn so Dr. Mangan decided he would have to get a letter out to the Executive Committee and make the decision later.

The meeting was adjourned.

ACTIONS OF THE EXECUTIVE COMMITTEE FOR THE BIENNIUM

October 1, 1969—CAID Ballot

I. I vote to accept the invitation of the Indiana School for the Deaf to hold the 1973 meeting of The American Instructors of the Deaf in Indianapolis.

Yes 10; no 0.

II. "The Council on Education of the Deaf (CED), an organization consisting of all members of the Convention of American Instructors of the Deaf, the Conference of Executives of American Schools for the Deaf, and the Alexander Graham Bell Association for the Deaf, representing about 10,000, which is nearly all the professional educators of the deaf, and nearly all deaf children in the United States, is the organization to which proposed legislation concerning education and welfare of the deaf child should be referred. The Secretary of H.E.W. should be advised of our concern and we should offer consultation services on legislation by the 12 member board of the (CED) Council on Education of the Deaf."

Yes 10; no 0.

III. "The CAID recognizes the firm necessity for a continuing council of organizations in the field of deafness and urges all of the 17 organizations and every school and facility in America, in the business of educating the deaf, to pledge a minimum of $100 a year to sustain the continued operation of the (COSD) Council of Organizations Serving the Deaf."

Yes 10; no 1.

IV. "Recommendation is made that The Convention (CAID) consider an increase in dues from $10 to $25, to enable the CAID to increase its services to its members, and permit payment of honoraria to speakers at the convention who are not engaged in the education of the deaf."

Yes 3; no 6.

V. "The Convention of American Instructors of the Deaf (CAID) believes that the (CED) Council on Education of the Deaf, working with the state professional organizations, is the appropriate agency for the certification of teachers.

"The CAID firmly believes that it is the responsibility of the profession to upgrade itself, and supports useful and helpful requirements for achieving professional certification.

"Training Centers and courses supporting certification of teachers of the deaf should consider the state requirements of qualified and trained teachers of the deaf.

"It has been noted that students graduating from Gallaudet College do not possess credits in education sufficient to enable them to satisfy the requirements for certification set by departments of education in certain states. The Convention recommends that the College re-evaluate its program in education and provide teacher training on the bachelor level for the otherwise qualified deaf students, that will give them the credits necessary to meet state requirements, thereby enhancing their opportunity for employment in schools for the deaf."

Yes 10; no 0.

VI. "The CAID should see the need to have a planned program of recruitment and placement designed to come in contact with as many students as possible. The CAID is urged to plan and coordinate a program in cooperation with local units, departments, schools and affiliates for recruitment of quality students and placement for teachers of the profession."

Yes 9; no 1.

VII. "It is strongly suggested that the CAID develop a dynamic public relations program in which there will be an exchange of information and ideas between the schools and the public."

Yes 10; no 0.

VIII. "The Mathematics Section of The Convention strongly urges all schools for the deaf to re-evaluate their mathematics curriculums and to start the teaching of mathematics with their deaf children in their very first years at the schools, by giving them fundamental mathematical concepts on which they will be able to build a strong foundation for greater mathematical achievement."

Yes 9; no 0.

IX. "The Convention of American Instructors of the Deaf recognizes its responsibilities to all members of the profession in each school and/or local unit; therefore, The Convention of AID calls upon every school or unit to consider organizing a local CAID Association, and to develop and adopt functional organizational agreements geared to the local circumstances and conditions, establishing two way communication and action with the CAID National Officers and the National Office, and the present Administrative Secretary, Dr. Howard M. Quigley."

Yes 8; no 2.

November 24, 1969—CAID Ballot

I. The tour being sponsored by the Conference of Executives through Lufthansa requires that people taking this tour be members of the Conference of Executives or the National Association of the Deaf. It would seem to me that we should authorize Lufthansa to include members of The Convention of American Instructors of the Deaf in their tours.

Yes 10; no 0.

II. Mr. Davidowitz, who is a teacher at the New York School for the Deaf, is working with Vagabond Tours and Scandinavian Airlines to provide a charter flight without any tour arrangements or housing. This would provide fairly inexpensive transportation to and from Sweden and provide opportunity for members of The Convention to do some independent travel in the Scandinavian countries. Therefore, I feel we should authorize Mr. Davidowitz and Vagabond Tours to include members of the Convention of American Instructors of the Deaf in their charter flight.

Yes 10; no 0.

December 15, 1969—CAID Ballot

I. The U.S. Office of Education and the Council for Exceptional Children are conducting the first Pan-Pacific Conference on the Education of Handicapped Children. The purpose of the Conference is to develop guidelines for improving educational programs for handicapped children in the Pan-Pacific countries. This meeting will be held in Honolulu, Hawaii, February 3-6, 1970. CAID and CEASD have each been invited to send two delegates. The Pan-Pacific Conference cannot pay housing and transportation costs. I am recommending that Howard Quigley, who is the executive for both CAID and CEASD, serve as the delegate for both groups. There is sufficient money in the travel budget approved in Berkeley to pay for this expense. Request approval to expend not to exceed $250 as CAID's share of the travel and housing expense in sending the executive secretary to the Pan-Pacific Conference.

Yes 10; no 0.

February 16, 1970—CAID Ballot

I. Pathfinder, Inc., a travel agency, would like to set up a tour to Acapulco following the Little Rock Convention. This is an additional service we can offer our membership.

Yes 9; no 0.

February 19, 1970—CAID Ballot

I. The Little Rock Chamber of Commerce recommends that we move our meeting a week earlier or a week later to avoid a freedom march.

Dates preferred: 6, June 27–July 1; 2, June 13–17; 1, June 20–24.

Yes 9; no 0.

March 27, 1970—CAID Ballot

I. At the CED Board Meeting held in January it was suggested that if manual interpreters are to be provided at the International Congress for the Deaf that CAID should provide them. This is based on the fact that most deaf people attending will be members of The Convention. I presume we could get interpreters if we pay expenses. It was suggested that two interpreters would be sufficient. Travel and board and room for two interpreters is likely to cost up to $1,500.

Yes 8; no 2.

May 16, 1970—CAID Ballot

I. You will recall the recent ballot which asked for expenses for interpreters to the International Congress in Stockholm, Sweden, August 17–21, 1970. The executive committee voted to approve this item of expense. However, it was suggested that we could obtain the services of interpreters already planning to attend the Congress at a lesser expense to the Convention. I followed through on this suggestion and obtained the services of Edward Reay and Suzanne Ladner. They are willing to serve as interpreters at the International Congress at a rate of pay of $50 per day for the five days of the Congress—at a total cost to CAID of $500.

Yes 9; no 0.

September 9, 1970—CAID Ballot

I. You will recall that you authorized the payment of $50 per day to two interpreters to serve during the International Congress held in Stockholm. It was apparent during the Convention that two interpreters were not enough to provide for the number of meetings and the number of deaf people in attendance. Therefore, I asked Mr. Gilbert Delgado and Mr. Kirk Wilson to help out with the interpreting. I recommend that we authorize payment for two (2) days of interpreting service for each of these two (2) men.

Yes 10; no 0.

September 10, 1970—CAID Ballot

I. I am enclosing a copy of my letter of July 29, 1970 to Mrs. Mary Jane Rhodes as well as a copy of her letter of August 5. These two letters summarize our correspondence regarding the activity of the Parent Section and its relationship to The Convention.

You will recall that the Parent Section was authorized at the Convention meeting in Hartford in 1967. Since that time the Parent Section met just prior to the Convention meeting in Berkeley in 1969 and there has been some parent activity around the country.

It now appears that there is enough motivation among some of the parents to get the Parent Section more firmly organized by the time of our meeting in Little Rock in June. The question that we must answer at this time is how much financial support the Convention is willing to provide.

Yes 10; no 0. Amounts suggested ranged from $200 to $5,000.

October 8, 1970—CAID Ballot

At the request of Mr. Holcomb, Mrs. Mary Jane Rhodes has submitted a proposal for a planning meeting to be held in Santa Fe, New Mexico sometime this fall. The purpose of the meeting is to organize the CAID Parent Section and make a proposal for the relationship between the Parent Section and CAID. The New Mexico School for the Deaf can house the meeting but cannot provide sleeping accommodations. The Parent Section is requesting that CAID support this planning meeting at a total cost of $2,184.

Yes 9; no 0.

December 4, 1970—CAID Ballot

I. The CAID Parent Committee recommends approval of the expenditure of $3,000 to support the activities of the CAID Parent Section for the period December 1, 1970 through July 1, 1971.

Yes 8; no 1.

II. Mrs. Charlotte Osborn, one of our directors, is not teaching this year. Since Article III, Section 1a, of the CAID Constitution indicates that "membership includes persons actively and directly engaged in the education of the deaf," Mrs. Osborn is apparently not eligible to continue membership on the board of directors. I would like to propose the name of Mrs. Johnnie Henry, a teacher in the Arkansas School for the Deaf, as a replacement for Mrs. Osborn.

Yes 9; no 0.

January 19, 1971—CAID Ballot

I approve the expenditure of up to Sixty Dollars ($60.00) for one-half the cost of a plaque of recognition to be awarded Captioned Films, Bureau of Education for the Handicapped, at the Convention in Little Rock.

Yes 10; no 0.

February 11, 1971—CAID Ballot

Mr. David A. Davidowitz, teacher at the New York School for the Deaf in White Plains, has sponsored tours to Europe for a number of years. He is asking permission to list CAID as an affinity group in order that members of The Convention may obtain the low charter flight round trip air fare. The Convention takes on no responsibility and it is possible for members to have a trip at a low rate. Please indicate your decision on the attached ballot.

Yes 10; no 0.

February 16, 1971—CAID Ballot

The COSD Board of Directors at their February 1970 meeting approved an increase in dues for active members from $125 to $150 beginning January 1971; $175 in 1972; and $200 in 1973, and thereafter. It is necessary that this increase be ratified by two-thirds of the member organizations of the COSD.

Yes 9; no 1.

March 11, 1971—CAID Ballot

I am enclosing a copy of a letter from Roy Stelle, who is secretary of the CED Joint Committee on Teacher Certification. As his letter indicates, CAID has not contributed anything to the cost of the committee which was established to rewrite the certification requirements. I would recommend that CAID pay $1,061.82 to the Certification Committee as its share of the expense. This is the average cost of the first two meetings and is equal to the amount paid by the A. G. Bell Association.

Yes 10; no 0.

MINUTES OF CAID EXECUTIVE BOARD MEETING

Monday, June 28, 1971—Little Rock, Ark.

Members present:

Dr. Kenneth R. Mangan, President.
Dr. Armin G. Turechek, President-Elect.
Mr. Jack Brady, First Vice-President.
Mr. Robert Dawson, Second Vice-President.
Mr. Gerald Burstein, Secretary-Treasurer.
Dr. Howard Quigley, Executive Secretary.
Mr. Paul Bird, Director.
Mr. Keith Lange, Director.
Mr. Edward Strieby, Director.
Mrs. Johnnie Mae Henry, Director.
Dr. Marvin B. Clatterbuck, Director.

The following motions were made and seconded:

1. The motion was made by Marvin Clatterbuck that Howard Quigley be authorized to update, change the size and reprint the CAID brochure. Motion was seconded by Jack Brady and carried unanimously.

2. That the proposed C.A.I.D. 1971–73 proposed budget be accepted . . . the motion was made by Jack Brady and seconded by Marvin Clatterbuck. The motion carried unanimously.

3. The motion was made that the Executive Secretary move the convention office from its present quarters with media to other rooms at the same address completely separated from media. This motion was made by Edward Strieby and seconded by Armin Turechek. The motion passed unanimously.

4. Marvin Clatterbuck made the motion that Ferne Davis be appointed Administrative Assistant to manage the C.A.I.D. office at a salary mutually agreeable. Paul Bird seconded the motion and it carried unanimously.

5. The motion was made that Arthur Norris be employed as expediter of proceedings at a rate of $5.00 per hour—not to exceed $1000.00. The motion was made by Armin Turechek and seconded by Edward Strieby. The motion carried unanimously.

6. Edward Strieby made the motion that on June 28, 1971, Howard M. Quigley, Executive Secretary, Convention of American Instructors of the Deaf is authorized to execute, on behalf of the Convention of American Instructors of the Deaf, a bond of indemnity to the State of Oregon for securing payment of a lost, stolen or destroyed warrant in the amount of five hundred eighty ($580.00).

The motion was seconded by Paul Bird and it carried unanimously.

7. The motion was made that CAID dues be set by the Executive Committee and approved by the General Assembly. The motion was made by Paul Bird and seconded by Edward Strieby. It carried unanimously.

8. Marvin Clatterbuck made the motion that the Executive Committee recommend annual C.A.I.D. dues of $15.00 effective January 1, 1972, with $10.00 going to the Annals subscription. The motion was seconded by Edward Strieby and carried unanimously.

TUESDAY, JUNE 29, 1971

Curriculum—ASB Auditorium

Chairman: Dr. Doin Hicks, Dean, Pre-College Programs, Gallaudet College, Director, Model Secondary School for the Deaf.
Recorder: Leland Clack, Coordinator of Mathematics and Special Projects, Kendall School, Gallaudet College.
10:30 a.m.: "*Cognition and Curriculum,*" Dr. Harriet G. Kopp, Professor, Speech and Hearing Clinic, San Diego State College.
11:15 a.m.: "*Implementing a Program of Individualized Learning,*" Dr. Doin Hicks, Dean, Pre-College Programs, Gallaudet College, Director, Model Secondary School for the Deaf.
1:30 p.m.: "*Individualizing the Curriculum Through Use of Instructional Packages,*" James Kearney, Curriculum Development Associate, Model Secondary School for the Deaf.
2:00 p.m.: "*Developmental Language Processes in the Young Deaf Child,*" Dr. Judith Burroughs, Psychologist, Callier Hearing and Speech Center.
2:45 p.m.: "*Individualizing Language Curricula,*" Frank Powell, Head, Educational Division, Callier Hearing and Speech Center and Virginia Herzog, Curriculum Coordinator, Callier Hearing and Speech Center.

COGNITION AND CURRICULUM

Harriet Green Kopp, Ph.D., San Diego State College

Some of you may recall that, two years ago, we presented a day's program in Berkeley dealing with cognition, curriculum, content and media. Today, I would like to discuss cognition and curriculum from a somewhat different frame of reference.

For the past ten years, teachers of the deaf and administrators of schools for the deaf have been excoriating themselves for the low achievement level of their students. They have been joined in this unpleasant and largely unrewarding self flagellation by numerous researchers, committees, commissions, alumni and parent groups and even by budget conscious legislators. It is high time we stopped to re-examine the larger task in which we are engaged rather than to continue to hack away at curricula, guidelines, teaching manuals, teacher preparation, communication modes, delivery systems for transmitting information including teaching machines and programming, as though by dealing with the component parts of the process of education we could somehow arrive at a magical annealing of the whole. We share this particular self delusion with our professional colleagues in general education.

Instead of wallowing in the academic deficits we observe, let us look at the successes and attempt to learn from them. What do our students learn most readily and with greatest enjoyment? Such subjects as typing, driver education, physical education and art seem o be more pleasurable than social science or mathematics. Their work in the woodshop or in home economics is apt to be more useful n their leisure hours than their expertise in geometry or biology. Professionally or vocationally, they tend voluntarily to retain and ncrease the skills they learned. It may be advantageous to consider that the student in learning a skill participates actively in the process and usually achieves early and measurable success. He understands the task, can comprehend the goal and can evaluate his progress along the way. Unfortunately, this has seldom been true in learning academic subject matter.

As educators, we have tended to regard manipulative and cognitive skills as disparate entities.[1] The deaf student usually develops a high level of confidence in his ability to manipulate either data or tools in a direct and largely repetitive fashion. He is not as secure nor as skilled in the cognitive processing that enables him to understand the principles and hypotheses basic to the manipulation of data and things in relation to the demands of particular situations or changing priorities. In general education, we have been more successful in our task oriented and vocationally specific school teaching than in our development of cognitive abilities and skills.[2]

In acquiring a skill, the student is required from the onset to practice the skill. He behaves as a driver, an artist, a typist or a printer. He is expected to make errors and to be lacking in proficiency but to profit from his self observation and from his observations of those more skilled. In academia, he has little opportunity to behave as a scientist in discovering new relationships or to apply mathematical principles to real life situations or to use language manipulatively as in writing a book.

After the initial period of acquisition, the student in art learns to mix paints or to understand perspective; the physical education student learns the complex rules of specific sports; the typist studies various letter forms; the shop student learns drafting; the home making student becomes involved in dress design or meal planning. In each instance, the skill is practiced prior to the acquisition of related knowledge. The integral relationship between the skill and knowledge are obvious to the student. They are instant, immediate and now, not projected into a future with which he cannot identify

The same student is not encouraged to participate actively in the skills of science until he has acquired the vocabulary and an understanding of the basic laws of science. Most students never become practitioners in the academic subjects and thus are denied the opportunity of becoming skilled in the art of thinking, which is in fact the skill basic to all academic subjects. Our curricular concerns are more apt to be with what students think than with the process of thinking. The French have an aphorism that states that 'everything the child learns in school, he forgets—but the education remains'. We know from our own school experience that information crammed for examinations is forgotten once it has been regurgitated; that lecture notes are filed and forgotten when the grades are in. Only if there is a conscious integration of knowledge learned through active application by the student is there a residual that favorably affects his ability to think critically within that subject matter area.

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[1] Aylesworth, Thomas G., Reagan, Gerald N., *Teaching for Thinking*, Doubleday & Co., Inc., N.Y., 1969.

[2] Silberman, Charles, *Crisis in the Classroom*, Random House, N.Y., 1971.

If we think of school as life itself and not as a sterile preparation for living, then education can be seen as relevant to the student's need to manage his immediate environment. Language, to the child, is the tool he uses to control his environment, to achieve his goals, to influence others, to communicate his desires. It is not an end in itself but a means to his particular goals. He cannot acquire linguistic skill in a vacuum. When the young child can succeed in managing his early environment, he will acquire the confidence and skills he needs to relate to more complex environments. Only if he is stimulated by his early learning will his curiosity be encouraged and satisfied rather than frustrated.

The child's initial learning experiences should be oriented around questions for which he desires an answer. He should be a doer, a laboratory experimenter in finding solutions to problems his teacher has helped him to identify. Even the pre-school student should be encouraged from the beginning to learn the skills of exploring, of asking questions, of accepting and rejecting information on the basis of its relevance to the problem. No student should be permitted to operate only as a follower of directions or as a passive recipient of facts.

The teacher should not make a practice of answering important questions. It is his role to guide the child to sources of information and to help in formulating possible conclusions but the answer must come from the learner. Critical thinking is a difficult skill to acquire. The teacher has the delicate task of providing enough assistance to prevent frustration while avoiding any domination of the child's thought processes. No matter what mode of communication the student prefers or has learned, the young deaf child's language deficit becomes a significant barrier if he is required to verbalize accurately or completely before he is permitted and encouraged to process information. Perhaps in our concern for the correct use of language, oral or manual, the child has not been given the opportunity to acquire the skills of cognitive processing along with his language.

Reading is a sophisticated use of language to interpret a printed or written code. The child will learn to read if he finds it useful to him. From the very start of his education, reading should be a tool by which the student organizes and acquires knowledge to answer his own questions. What he reads must be of direct and immediate interest to him, not a sterile exercise to develop a skill to be applied at some future date. Especially for the deaf child, it is essential that reading be developed as a by-product of writing. The experience story that records his participation in events of current concern to him is the most valid vehicle for reading. The actual writing may be done by the teacher at first, but the language must relate directly to the child's experience and reflect his cognitive processing of the facts.

Learning is the process that makes order out of the confusion of stimuli with which we are assailed. It is the patterning, reorganizing and reintegrating of new data with old that is critical to the development of learning skills. It cannot be taught directly. The teacher can make opportunities for the learner to acquire the skills. What is taught is not necessarily learned. What is learned may not be capable of expression. We are accustomed to evaluating learning by the behavior that has been learned; but the physiology of the learning process is not clearly known nor may it be assessed readily or directly.

The psychologist tends to define learning as a change in behavior resulting from experience. The teacher may assume that learning exists only in its visible or measurable manifestation. With animals, the psychologist has had to infer learning from behavior because of lack of direct communication. He has assumed that motivation must be external and reward oriented. (Roy Parks may not agree with this hypothesis since he has developed more direct communication modes with his shepherd dogs which we hope he will demonstrate). Those who train animals or are trained by them sometimes wonder who conditions whom in some experiments. There was a cartoon many years ago of one pigeon saying to another, "Now watch. I have him trained to put some feed in that hole everytime I push down on this lever." (We had our bird hunting style changed by an Irish setter who used positive reinforcement techniques very skilfully and refused to alter his style to suit ours.)

The educator knows that learning is a cumulative process that takes place at different cognitive levels and to varying degrees. Incidental learning and direct learning both may be related to experience. Although the result of learning may not be displayed, it may still be subject to retrieval and recall. If we insist upon regurgitation as proof of learning, we may overteach and persuade the child to reject learning through boredom. The Hawthorne effect, which establishes the fact that work performance tends to improve with change in the environment, should serve to remind the educator that the educational environment should be varied and responsive to the learner's changing status. Learning for humans can be pleasurable in itself without the need for external reward. The human student must understand the problem, the reason for the reward if one exists and why the "operant" operates if we are to differentiate true learning from conditioning.[3] Success in learning is the most powerful reinforcer we can provide. Motivation may easily be diminished if the young child is faced with perceptual experiences which he cannot pattern satisfactorily. Even adults are frustrated by experiences that are in opposition to previously learned patterns. In the teaching-learning situation, both child and teacher must strive to maintain open and inquiring minds and an active curiosity. They should reject over-simplification of solutions and practice the questioning of assumptions with respect to fact and logic.

Emphasis on cognitive processing requires that the teacher be free to select from appropriate teaching modes and be skillful in their use. The combination of individualized and team teaching makes it possible for the child to learn at his own pace and non-competitively or at least without uncontrolled external pressure. The use of television makes it possible for the master teacher to reach a wider population. Teaching machines and programming of various kinds give the teacher a choice of options suitable for particular children at specific points in time. In order to exercise these options, the teacher must be expert in learning theory and in the ongoing assessment of learning.

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[3] *The Schools*, Mayer, Martin, Doubleday, Anchor, N.Y., 1961.

To teach through problem solving methods using simulation, gaming and discovery simplifies the teaching task by securing the student's continuing attention since the questions being answered are his. His motivation is assured if his progress is evident through his success in arriving at correct answers. His learning is evident in his manipulation of ideas. Such a school can be a center of inquiry in which teachers and students participate together in the process of learning.[4] The teacher receives continuous feedback on which to base his decisions to alter teaching modes, programs or materials and to evaluate both the success of his teaching and of the student's learning. Highly skilled teachers do this automatically and without conscious effort. Less skilled teachers are apt to associate lack of success in learning with the child and to insist on altering his home environment, physical condition, attitude or behavior without basic change in the teaching situation.

Teacher preparation has not always provided the skills and knowledges basic to inciting, understanding and answering children's questions. Not all teachers have had courses which present: the types of difficulty children have in learning specific subject matter and patterning of information; recommended tools and techniques for remediation and prevention of such difficulties and methods of organizing appropriate learning sequences. The minimum essential skill is that of being able to guide children to pattern information, events and experiences for and by themselves.

When the teacher is well prepared, then he is freed to teach children and not curriculum or content. He can permit learning to occur without the pressure of active, direct or rote teaching. As teachers, we must help our students also to think at the intuitive level by developing the process of "tacit knowing",[5] the knowledge of particulars and relationships that we cannot itemize and to which we attend only for their cueing effect. Such knowing is the basis of the intuitive solution to problems, of creative thinking, of scientific hunches and of unconscious weighing of probabilities. We know more than we can tell—. We recognize a familiar figure or face but we are unable to verbalize the particular combination of perceptions that make it possible.

Thinking is by its nature intentional. Manipulative functioning of complex dimensions of thought as it patterns and reorganizes facts and makes questioning possible is the ultimate goal of the learner. To intuitively grasp a problem, to have an intimation of the relationship of previously uncomprehended facts, to phrase a perceptive question should be the end product sought by the student. To be skilled at inducing the learner to think is the fundamental goal of the teacher.

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[4] Silberman, Charles, *Crisis in the Classroom*, Random House, N.Y. 1971.
[5] Polanyi, Michael, *The Tacit Dimension*, Doubleday & Co., N.Y. 1966.

IMPLEMENTING A PROGRAM OF INDIVIDUALIZED LEARNING

Doin E. Hicks, Ed.D., Dean, Pre-College Programs, director, Model Secondary School for the Deaf, Gallaudet College

Whatever indictments historians of the future may make regarding education in our country, at least one accolade is rather certain: We have pioneered the notion that free public education ought to be readily available to everyone in society. The exact degree of success of this effort may be open to conjecture; nevertheless we have been successful. Our educational system has decreed further, that education for everyone deserves a literal translation; thus the groups whom we judge atypical have received educational services to an extent not previously known.

A philosophy of mass education has not been without inherent ills. Perhaps it was a logical step that our educational system should take a cue from the rapidly developing industrial complexes and evolve an assembly-line approach. Thus mass education has emulated, to a great extent, the theories of mass production. We have injected our children, at age five or six, into an educational mold and yet we have expected them to emerge years later as individuals differing from each other to a far greater extent than upon entry. Surprisingly, for the majority, this system has worked rather well.

Educating the majority is not good enough. What about the large and, until recently at least, silent group of students for whom the system has been largely ineffective? We have, at least, paid lip service over the years to a recognition of this problem. How often have we heard or read statements, such as that I now am making, which, when paraphrased, come out something like the following: "We must do a better job of meeting the individual needs of our students." After thus ventilating ourselves we go back to our cubicles convinced somehow that having said it will make it come true.

To prevent an aura of negativism, I would hasten to add that many outstanding efforts have been made within our system to make the learning process personally palatable and successful for the individual student. Various grouping procedures for students and deployment systems for staff have been projected to this end. Contracting between individual students and teachers was explored as long ago as the 1930's. Distinct methodologies such as that termed the "project approach" have been evidence of attempts to personalize and individualize learning.

In recent years broad and sweeping curricular revisions have been made, largely in an attempt to bring meaningful education within the grasp of larger numbers of students. Federal intervention has provided necessary financial assistance to effectively demonstrate the need for educational reform. We in education of the deaf have an especial indebtedness for the beneficence of our government and its influence toward improvement of our status.

If one can rightly presume that education is a personal matter and should be somewhat different for each person, then it follows that the process ought to be an individualized one. With this premise established we may further presume that, for the handicapped child, even more emphasis should be placed on personalizing and individualizing his learning experiences. Individualized instruction is a broad concept, one that is frequently misunderstood and often considered out of reach except by the minority of wealthy schools. Before discussing the prospects of attainment, it is important to arrive at an operational definition of the concept. Let's look at the specifics of what it is before examining procedures of how we go about it.

Educators have long recognized that students differ in their ability to learn. They have acknowledged this fact in their efforts to group students according to various criteria: e.g., age, IQ, past achievement, reading level, or whether or not they were college bound. Given similarities in one or several of these characteristics, schools assumed that a number of students could be taught the same subjects as a group, at the same time, in the same way, and with fairly predictable results.

All of this has changed, at least theoretically. It is now recognized that the number of human characteristics that can affect learning is much larger; not only are IQ's different but the rates at which students learn are different; the style of their learning may differ (inquiry, discovery, straight information input); the social situation affects different students differently (large groups, solitary study, interaction with teachers, discussion groups); some students learn some subjects better through one medium rather than another (printed page, live teacher, visual displays); close guidance may be required by some students whereas others may even be allowed to set their own objectives. The list could be extended even further.

As a first step toward defining individualized instruction, let us use the term "learning variables" for all those things within the student that can advance or retard his success in school. The word *learning* should be stressed because these are characteristics within the learner, not elements of the instructional system. They are *variables* in the sense that they can vary from student to student in quantity or quality.

A large number of such variables has been identified with some degree of certitude and it may be safely assumed that others still undiscovered exist in abundance. If we could assume that there are, let's say, 20 such variables in each student then it is highly improbable any two students in a school possess all 20 of these learning variables to the same extent or degree. Consequently, one of our basic assumptions must be that in any learning situation no two students are alike in all those human qualities that are relevant to learning.

So far we have considered only the student. What of the instruction? To give the broadest base for a definition of individualized instruction it will be helpful to use the concept of the total environment as being instructional: books, teachers, physical plant, lab equipment, visual aids, the curriculum, policies with regard to student choice, disciplinary policies—everything. We can call these "instructional variables."

A third phrase that can usefully contribute to a definition of individualized instruction is the "learning situation." This simply consists of a student at a point in time and space attempting to complete an educational objective: cognitive, affective, or otherwise.

We now have the elements for a definition of individualized instruction. Individualized instruction is taking place when for each student, in every learning situation, each of his learning variables is being helped to operate at its maximum potential by making available to him all of the relevant instructional variables.

This is a very abstract definition of individualized instruction. An example might help. Consider a student for whom the learning variable, "subject interest," is very high for mathematics. Does the school's total environment make it possible to maximize this interest by making available the relevant instructional variables? Does the school have the necessary books and visual aids? Do its policies allow the student to spend less time on other subjects and more time on mathematics? Or is every student only allowed and required to spend the same amount of time on mathematics? Are the math teachers ready to abandon material *they* think must be "covered" and let the student set his own goals in the subject? And is there a teacher in the school capable of guiding this student through some advanced mathematics?

This definition of individualized instruction is not only abstract, it is a concept that is hardly attainable. To quote Fred Tyler and William Brownell (1962), "Individualization of instruction to the extent of 100 percent is an impossible goal, and the quicker we abandon it, the better."

But they go on to say, "The fact that we cannot hope to attain this millenium does not, however, justify a do-nothing policy. It is not too rash to say that in most schools individualized instruction can be increased as much as 10 percent or 20 percent . . . Moreover, such modest gains . . . might amount to a miracle in educational history."

-It might be added that many teachers and administrators assume too readily that individualization equals expense, that the more a school individualizes, the larger the budget must be. This is true for certain aspects of individualization, but much can be done with little or no added cost.

It might be appropriate here to enumerate a few of the things most sensitive teachers already are doing in an effort to individualize instruction for their students:

1. Providing projects for certain students, either as extra credit activities or to allow students to pursue certain of their interests.
2. Developing classroom leadership through the assignment of meaningful duties other than those which are merely classroom work details.
3. Providing opportunities for students to do independent research either in, or out, of the classroom.
4. Providing a variety of remedial work for students who have such demonstrated needs.
5. Providing for differentiated grouping within a classroom.
6. Providing a measure of non-gradedness within the classroom by allowing variations in the time or rate required of students for moving through a course of study.

7. Accepting different levels of output for each student.

8. Asking for pupil participation based on the teacher's subjective knowledge of what the child can do.

9. Providing tutoring or one-to-one work with students.

Many of the above considerations may be aimed merely at keeping all the students together. Individualization in response to student need is absent, to a great degree. There is no place for the student to follow his own felt needs—to have the opportunity to do work that lies outside those aspects of the curriculum held in high value by the school. It would seem important that we include in our present system a provision for the student to say, "Here are some things I wish to learn."

How do we individualize further, taking into account a greater role on the part of the student for determining his course of action? Perhaps the first step is for the school to look closely at its curriculum and decide those things which the student must learn based on the adult concept of what knowledge is of most worth. It might be found that certain parts of the required course of study could be altered by student choice, while still taking into account such things as accreditation standards and college entrance requirements.

There are certain aspects of individualization which can be done in any classroom without violating any school policy. Among these are the following:

1. The most pressing need, and perhaps the most obvious one, is that of identifying the status of learning variables for each student—to find out, accurately, where the student is. It would be fortunate if we had a broad range of reliable diagnostic instruments to do this for every possible learning variable, but we do not. However, we are not completely without diagnostic resources, and those we have should be applied vigorously if we are to increase the individualization process. Careful analysis of the results of sub-tests of academic achievement batteries frequently are quite revealing. Such formal measures may be supplemented by the informal technique of close and continuous observation of student performance. Adaptation of instruction on the basis of such observations should be continuous.

2. Teachers should be given the opportunity to learn contemporary ways of stating educational objectives so that they relate to measurable, behavioral outcomes. Mastery of the skill of preparing behavioral objectives must receive high priority by a staff attempting to implement a program of individualized instruction.

3. The provision for teacher-prepared materials for individual students is highly important. This, of course, requires extra time for the teacher or the availability of such supportive personnel as teacher aides or media specialists.

4. The use of multi-media and of media in various formats can also be quite helpful. This does not mean that more equipment must be purchased. Making the same information available through the school's existing variety of media—the printed page, projecturals, models, and the like—will insure that a greater number of students' learning styles are accommodated.

5. The relaxing of requirements with respect to the kind of response required by the teacher is another way toward individualiza-

tion. Some students respond more easily and more freely by oral means, others by writing, and still others by demonstration or by making something.

The above steps generally can be taken on his own by most teachers within the parameters of existing policies of most schools. There are certain aspects of individualization which require commitments at the school system level and involve all of the school staff.

A list of such strategies might include the following:

1. Modular or other forms of flexible scheduling.
2. Development and utilization of certain multi-media systems.
3. The development of differentiated staffing patterns such as those involving the use of teams, teacher-aides and other supportive personnel.
4. A variable credit system for certain courses allowing different entry and exit levels.
5. Utilization of student teams for learning as well as teacher teams for teaching.
6. Permitting experimental grouping procedures that do not relate to grade, course, size of group or other conventional measures.
7. Extensive development and utilization of resource centers.
8. Allowing for in-depth study in one specific area or segment of the course, perhaps leaving out other parts altogether (a technique that has been shown to work well with less able students).

A few general statements regarding individualized instruction are appropriate here, one or two of which may be a bit negative, or at best a warning to those who may feel that individualized instruction is the answer to all our education ills:

1. There are little data which support the contention that individualized instruction really is superior in the areas of skill-building and in content achievement. There are, however, strong anecdotal data which indicate that individualized instruction is highly motivating and also assists the learner in developing as a person.
2. There is evidence to indicate that certain students and in particular, young children, do not adapt easily to individualized procedures which require large measures of self-direction.
3. The initiation of an individualized instruction program requires resources to provide in-service training for staff members and additionally requires that staff have adequate planning time in preparation for teaching.
4. Full scale implementation of individualized instruction requires large amounts of material.
5. Students, generally, are very receptive to and supportive of individualized instruction.

The implementation of a program of individualized instruction requires that the school system first formulate a plan that reflects consensus of those involved. This implies a development of a philosophy that is acceptable to teachers, administrators, parents, and students. It is probably appropriate that any system contemplating such change should begin rather modestly. Since "nothing succeeds like success" it is also probably appropriate that staff be selected rather carefully for participation in any sort of pilot or beginning program of this type. A total commitment to individualized instruction is, of course, an expensive proposition. Much can be done, however, without added expense but rather through a redirection of available resources.

Finally, it is appropriate to mention a misconception that is rather wide-spread which equates individualized instruction with independent study or with a student always working in a corner by himself. For any given student it is entirely appropriate that at certain points instruction for him may best be individualized by his joining other students in a group discussion, listening to a lecture, or watching a film with other members of the class. Thorwald Esbensen (1968) has stated: "Individualized instruction is not the same thing as 'teaching students individually.' An instructional system is individualized when the characteristics of each student play a major part in the selection of objectives, materials, procedures, and time. It is individualized when *decisions* about objectives and how to achieve them are based on the individual student. One does not simply say that a system is or is not individualized, however, for it is not a black or white matter. Rather, one tries to identify the *nature* and *degree* of individualization."

Certain classroom environments are conducive to individualized learning. In an authoritarian teacher-centered situation, students needs are not likely to surface readily. In a learning environment in which the principles of self determination, of basic democracy prevail, the student needs usually will be evident. In a class in which information is *discovered* by teacher and student instead of being *handed down*, the first steps toward individualization already have been taken.

Few references are made herein to individualization as applied specifically to education of deaf students. This has been deliberate as it would seem that the basic concepts apply broadly. There are certain characteristics peculiar to the deaf learner but the very nature of individualized instruction is such that compensatory measures for such variables are at its basic essence. The philosophy of and techniques for individualization may be considered a first order of commitment, after which, the educator of the deaf should work to adapt educational programming to accommodate the particular ways in which learning is affected by the sensory deprivation of deafness.[1]

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[1] Assistance of the following persons in the preparation of this paper is gratefully acknowledged: Mr. James Kearney, Coordinator of Curriculum Development, Model Secondary School for the Deaf and Dr. Guy Watson, Director of Instructional Systems and Media, Model Secondary School for the Deaf.

INDIVIDUALIZING THE CURRICULUM THROUGH USE OF INSTRUCTIONAL PACKAGES

J. James Kearney, Coordinator of Curriculum, Model Secondary School for the Deaf, Gallaudet College

The long sought goal of truly individualizing instruction for every student has come much closer with the advent of a new educational tool, known variously as the learning activity package, the individualized study unit, or the instructional package, the name that will be used in this paper. The advantages of the instructional package are so clear and so evident, that an explanation of its nature and of its potential for individualizing learning should cause every educator to think seriously of converting his own curriculum into the form of instructional packages.

In this paper, the meaning assigned to the phrase "individualized instruction" will be set forth, the elements of an instructional package will be described, and the potential of such packages for individualizing the curriculum will be argued. Some suggestions will be made for those who wish to begin creating instructional packages for their own use.

There is very little that is new in the separate concepts and procedures that will be described and much will seem familiar. However, what may be unique is the tying together of these concepts and procedures into a tool for moving closer to the age-old hope of educating each child as an individual.

I

The phrase "individualized instruction" has become so worn with use that it is hard to realize that it stands for one of the noblest beliefs of mankind: that every human being is unique and that teachers and schools should respect this uniqueness when trying to help children learn.

Every good teacher is aware of individual differences in students and tries his best to do something about those differences. This effort usually amounts to teaching the so-called average students in the same way, while paying special attention to the few very bright or very slow students. Other devices used are the track system or grouping students within a class according to the teacher's estimate of their abilities. Such devices may reduce the range of differences in the group being taught but instruction is still far from individualized. Every experienced teacher knows that these devices are never very satisfactory. Yet it is the best they can do within a system constrained by the requirement that students be grouped into "grades," taught within fixed blocks of time called "periods," and given the same pre-determined knowledge and skills called "content."

Even experienced teachers may not realize the spread of learning abilities within a single class. Goodlad has pointed out that the spread in achievement increases with years in school and that the spread is approximately the same as the number of the grade-level: that is, by the fourth grade, there is a spread of four years in general achievement among the students in the usual fourth grade class. And the spread actually increases in the years beyond that. He says that a fourth-grade teacher may have in her class only three or four youngsters achieving at the fourth-grade level (*1*).

The above figures are for over-all achievement. Goodlad also points out that in reading and the language arts the spread may be even greater. "Hence, in the fifth grade, there frequently is an eight-year spread in reading achievement between the best and poorest readers" (*2*).

A close look at the meaning of "individualized instruction" is necessary if we are to change radically the institutional structures that make individualized instruction impossible. Briefly, it is instruction that takes into account as many individual differences as possible. The literature on individual differences is vast; yet, according to Goodlad, the "total picture" is still "only roughly sketched in" (*3*). No attempt will be made here to review that literature. All we need is an operational definition that will allow us to discuss the uses of the instructional package.

A student has a number of learning characteristics which affect his ability to learn. Some of these are: the rate at which he learns, the subjects that interest him, his I.Q., his cultural background, the media by which he prefers to learn, and the social setting in which he functions best (small group, large group, alone, tutorial). Other differences exist but these are enough to work with.

To truly individualize instruction a school must provide an environment in which each of a student's learning characteristics is able to function at its best. Important elements of the environment are the curriculum, the materials, the arrangement of students, time, space, and above all, the teachers. When each element of the environment is appropriate for the relevant learning characteristic of each student, then instruction can be individualized.

It should be noted in passing that individualized instruction is not to be confused with independent study. The latter is only one of several ways in which a student may learn. For a given student at some point in time, attending a group lecture may be the best way to individualize for him.

II

The instructional package is one way—and a very promising way—to individualize the curriculum. It is not a cure-all. It is not a substitute for the teacher. In fact, it makes the teacher's job more challenging, because now the teacher *does* have the time to deal with students individually and all her creativity and sensitivity to student needs will be called into play.

What is an instructional package? A description of it will have to cover ground with which many may already be familiar but the ground must be covered to make sure that all understand what it is and what it is not.

The elements of an instructional package are its objectives, a pre- and post-test, a list of learning activities, self-test, and a set of required materials and media.

Of central importance are the objectives of the package. These are stated in very specific detail and in language that says what the student must be able *to do* after going through the package. They are usually called specific behavioral objectives, an unattractive name and one that unfortunately suggests something mechanistic and inhuman. However, the word *behavior* here means simply *performance*. Use of the word does not imply commitment to behavioristic psychology or teaching machines.

Much has been written about behavioral objectives and there is no need to go into detail about them at this time (*4*). It is enough to say that they should be rather small in scope and should be sequenced in some logical or psychological order, both within the instructional package and between instructional packages. The objectives may be cognitive, affective, or psychomotor.

The next element of the package to be developed is the post-test. Through this the student demonstrates whether or not he can perform as required by the objectives. It is of utmost importance that the post-test items test the ability to meet the specific objectives and not some other, related ability. For example, if an objective calls for the student to select three causes of the Civil War from a given list, it is not valid to test this ability by asking him to write an essay on the causes of the Civil War.

Vital to the success of instructional packages as a system is the pre-test, taken by the student before he begins work on the package. It has two functions: it reveals whether or not the student has the prerequisite knowledge or skills to make success possible and it reveals whether or not the student is already capable of the desired performance. If he is, then he can skip that package while receiving credit for having achieved the objectives.

Once objectives and tests have been prepared, an instructional strategy must be mapped out. Although this strategy is not spelled out in the package, it must be worked out before going any further. The author must ask himself such questions as, "Is this objective best reached through an inquiry approach? Should the student begin with examples and be led to a general rule or should the rule be stated first? What motivational possibilities exist? Is there more than one road to the objective?" Perhaps basic to any instructional strategy is recognition of the level of complexity of the objective. Here Bloom's taxonomy or some other system of ordering learning skills would be helpful (*5*).

When the overall strategy has been thought through, the next task is to develop the learning activities that will embody this strategy. It is at this point that the creative abilities of the experienced teacher are most valuable. Imagination and inventiveness are at a premium here.

The variety of possible activities is great and difficult to categorize. What may be called the "social setting" is one category. Should the activity take place in a large group? Small group? Between teacher and student? With the student working alone? Is it desirable to offer alternative settings to the student? Another category within which choices must be made is that of media selection. Printed word? Slides? Role playing? Games? Teacher talk? And so on.

Whatever the strategy, the social setting, or the media, the number and kind of activities should be great enough to give the student more than one path to the objective.

Another characteristic that should run throughout the learning activities is a combination of required student response and confirmation of the correctness of his response. This is a well established way of reinforcing learning. The intrinsic reward of knowing that he is right will rarely be surpassed as motivation by any extrinsic reward, in the long run.

This same pattern of student response, confirmation, and reinforcement should be summed up in a student-scored self-test as the final activity before the teacher-administered post-test. By checking his learning without teacher intervention or the chance of public failure, the self-test helps the student take the post-test with confidence, since success on the self-test almost guarantees success on the post-test.

The final element of the instructional package is a guidebook, which is placed in the student's hands. The guidebook ties together all of the above elements. It begins with a simple rationale, or explanation of what the package is about and how it fits in with what has gone before. Next in the guidebook the student sees the objectives—, but written in a way that *he* can understand. The original statement of an objective should be prepared with all the precision advocated by Mager and others but if so presented to the student, he will usually not read it. If it is important for the student to know where he is going, it is important to make the statement of objectives readable and attractive. Knowing his objectives should give the student a sense of direction and relieve him of any doubts he has about what is expected of him. No longer need he worry about what the teacher wants or what will be on the test.

After reading the objectives in the guidebook, the student is given the pre-test by the teacher. On the basis of his performance on the test he may be directed to skip the package or to begin the activities.

Directions for the activities are written in the guidebook, as simply as possible. Each activity should be numbered for ease of reference. When the activity is finished, the student initials that activity in the guidebook, thus helping both himself and his teacher keep track of his progress. This is important because a package may be worked on over a period of days, and each student will be at a different point in the package.

While the directions usually refer the student to something outside the guidebook, often the teacher may want to write her own explanation of the content, and for convenience this may be included in the guidebook, rather than being a separate item the student has to go and get.

The guidebook should also include the self-test and its answer key, so that the student can check on his readiness to take the post-test without having to go to the teacher. The guidebook can conclude with a statement telling the student to ask the teacher for the post-test if he feels ready to take it.

It should be remembered that the guidebook is not in itself the instructional package. It is a roadmap guiding the student through the package, thus relieving him of his dependence on the teacher for direction and giving the teacher more time to give individual help to other students.

A final point must be made about the guidebook. It is written at the lowest possible reading level. If the student can't read the directions and has to ask the teacher to explain them, the purpose of the guidebook is largely defeated. As for the danger of holding the student back in developing his reading skills, the guidebook is not the place to teach reading. The reading materials to which the student is directed can be at whatever level is appropriate.

To review, the total package consists of objectives, pre- and post-tests, learning activities and materials, a self-test, and a guidebook.

In what way is this different from an ordinary lesson plan, apart from the careful preparation implied? The principal difference is that the lesson plan is prepared for the use of the *teacher* and with the ordinary graded classroom in mind—the teacher telling a group of students to do pretty much the same things at the same time—whereas the instructional package is prepared for the use of the student, with the intention that each student will go through it at his own rate of speed, making his own choice of activities.

III

With the nature of an instructional package now clearly in mind, it is possible to describe how it can be a tool to individualize instruction. Let us consider first the behavioral objectives.

At first glance, use of specific behavioral objectives may seem to be the very opposite of individualization of learning. Do they not require that every student leap over the same hurdles, go through the same sequence of learning, as every other student? Do they not close off the student from exploring byways that may pop up before him in a totally unplanned, unspecified way? The answer is, "Not necessarily." Behavioral objective *can* be used in a mechanical way to program every student along the same path. Like all good things in life, they can be abused.

One obvious way of avoiding this is to offer the student some choice of objectives. Particularly is it desirable to offer the more interested student or the brighter student a larger number of objectives to try to achieve. It is also possible to let some students suggest their own objectives. If a student shows an interest not in the package he is working on or not in any available package, the interest is often expressed in very vague terms. But if he has become familiar with specific behavorial objectives, he can be asked to restate his interest in more precise terms, approximating the precision of a specific behavioral objective, and thus he gains in having a more precise, more truly personal goal to explore. The teacher can then suggest learning activities for him and prepare a self-test he might use. The test, incidentally, need not be a written test.

Offering choices among objectives and offering the chance to state his own objectives are things that can occur only if the teacher is alert and responsive to the student's interests. The package is not intended to replace the teacher or make the teacher a mere "manager of learning," as some would have it. Properly made and properly used, it can give the teacher more time and opportunity to do those things which only a living teacher can do: sense the needs and interests of the student, encourage the student to pursue the bypaths of knowledge, and react positively to the often changing moods of the child or youth.

Behavioral objectives help the teacher in another way to practice the art of teaching. By specifying the objectives precisely, the teacher can identify a student's difficulties much more quickly and much more precisely than if the objectives are not stated or are stated very generally and vaguely. The teacher can then practice the true art of teaching: diagnosing the student's needs and prescribing remedies for them. This is extremely difficult to do in the usual classroom setting. There the teacher is often left with the uncomfortable feeling that many of his students are having some vague, unidentifiable "trouble" with fractions, for example. With specific behavioral objectives stated, the teacher can zero in on each student's individual difficulty and take steps to help him.

The greatest value of the specific behavioral objective for individualizing instruction, however, lies in its relation to other parts of the instructional package. First, consider the pre-test that evolves from the objectives. Without precisely stated objectives, the teacher cannot devise a test that accurately measures the student's readiness for attempting the objective or that reveals whether or not the objective has already been achieved. On the other hand, with a good pre-test, made possible only by first stating the specific behavioral objectives, it is possible to individualize for two kinds of students: the one who does not have the necessary entry knowledge or skills and the one who is already capable of performing as the objective specifies. The first student can be given remedial attention and be relieved of the frustrations arising from attempting work for which he is not ready. Just think of the emotional damage done to children who are constantly pushed beyond what they are ready for. The second kind of student—the one who is already capable of the objective—is saved the crushing boredom of sitting through instruction he does not need. Thus the specification of precise objectives makes an accurate pre-test possible, and the accurate pre-test makes individualization of one important kind possible.

The individualization made possible by the instructional package is most evident in the learning activities. These, too, spring from well stated objectives and have validity and usefulness only in relation to the objectives. The existence of a specific behavioral objective has the effect of minimizing the chance of putting the student through useless, irrelevant activities, i.e., activities which may teach him nothing at all or something unrelated to the objective and therefore may confuse him.

The existence of a specific behavioral objective has the positive effect of giving the teacher a clearly defined target for preparing instructional designs and materials. Almost inevitably the teacher will think of more than one path to the objective. This is entirely to the good. All of the alternatives should be included in the package. Here is where great variety of choice can be offered to the student and individualization be made a reality. Here is where the teacher's imagination and past experience can be used to the greatest extent.

Another individualizing effect comes from the fact that the student is given a guidebook, written directions for conducting his own activities and does not have to wait for the teacher to tell him what to do next. He can go at his own rate. Another individualizing characteristic of the instructional package is the student response and confirmation element. Unlike his experience in a classroom situation, the student is assured that he is understanding the material and can proceed with confidence: if this device tells him he is *not* understanding it, he can review what he has done, try another activity, or ask the teacher for help. (No pre-packaged instruction can ever anticipate all student variables or replace the teacher.)

It must be emphasized again that the instructional package is not the equivalent of independent or solitary study. Too often the name brings up visions of a child huddled over a book all by himself in a study carrel. This view is erroneous. The activity called for may be to work with another student or with a group of students. It may call for the student to confer with the teacher. It may call for a group field trip, a collective project, a joint laboratory experiment, or attendance at a school-wide function. Any one of these may be the best way to help a particular learning characteristic of a particular student.

IV

So much for the instructional package and its individualizing elements. What is the role of the teacher in a school using instructional packages? Let it be said again that the instructional package is not intended to replace the teacher. It is merely one way of refining, reorganizing and applying what teachers have always done—with the added advantage of letting the teacher do those things for the individual student which can be done only through direct human contact.

The teacher has two roles in a school which uses the instructional package: as a maker of the package; and as a guide, consultant and reactor to the students using the package.

Making an instructional package is very much a teaching activity. Anticipating, organizing, inventing, and evaluating have always been integral to teaching. All of these are involved in making an instructional package.

The experience of creating an instructional package is very enlightening for the teacher trying it for the first time. It is also very demanding and, for some teachers, almost traumatic. It may be the first time the teacher has had to examine objectives in detail, state them precisely, and sequence them logically. These tasks inevitably require the teacher to analyze the subject in far greater detail than ever before and to arrange the concepts, skills, etc. in some kind of hierarchical order. It often exposes as irrelevant favorite lectures the teacher may have included in her teaching for years, simply because she had never examined the objectives they were supposed to achieve.

In trying to create learning activities of enough variety to provide different paths for different students, the teacher is again challenged as never before. It is not easy to anticipate the individual needs of all the prospective users of the package.

If the tests do in fact test precisely for mastery of the objectives, the teacher cannot hide from herself the failures of the learning activities to help the student learn. No subjective glossing over of the results is possible, no assignment of blame to the student is acceptable. The activities prescribed must be reexamined and revised, or replaced with other ones.

Finally, the instructional package should be written so that any other teacher can use it, and therefore, the teacher-author finds herself leading a kind of fishbowl life, with her every teaching goal and method subject to the scrutiny of other teachers, indeed a novel and disturbing experience.

The second role of the teacher in relation to the instructional package is to take advantage of the opportunities now offered to treat every student as an individual. When the pre-test shows that a student is not ready to attempt the package, the teacher must diagnose the student's trouble and prescribe a remedy for it, often with little time to give thought to it. No instructional package is perfect or can in itself take care of all individual differences. When a student in the midst of one is in trouble and appeals to the teacher for help, the teacher must be able to understand the student's needs and to offer alternative approaches.

The teacher must develop sensitivity not only to the needs of students in trouble but to the special interests of students for whom the package may not be rich enough in alternatives or in challenges. The alert teacher will be ready to depart from an instructional package if she detects a genuine interest in something not included in the package. Too strict adherence to the package can be just as stultifying as an old fashioned concentration on what is in the syllabus or textbook alone.

V

If we grant that the instructional package is an excellent means for individualizing the curriculum, the question may arise, "Can I purchase some to meet the needs of my students?". Unfortunately, there is no satisfactory answer. Instructional packages have been developed at many schools, and continue to be developed. Yet several factors work against obtaining them: few, if any schools, have complete courses in the form of instructional packages, and inserting their isolated packages into one's own curriculum is extremely difficult. The day may come when these packages exist in such abundance that one can simply order the course one wants, but that day is not here. Another drawback to buying someone else's packages is that they may call for extensive use of media and equipment beyond the budget of the ordinary school.

However, any school or indeed any teacher can make a start toward individualizing the curriculum by creating instructional packages. The packages may be very "lean" at first, offering few alternatives and little choice of media, but they need not be very "rich" in offerings to be superior to the sparse fare set before the ordinary class which is being taught as if all the students were the same. (The bibliography lists a few books which will be useful to anyone willing to try.)

The first step is to convert the curriculum content into a set of behavioral objectives. (If more than one teacher is involved, it will be wise to precede this step by obtaining general consensus on the scope and sequence of the content.) These objectives will help improve even the ordinary lesson plan for the ordinary classroom situation. A set of objectives plus a pre-test can be given to each student and already the teacher will be on the road to individualization.

Next, directions for a few activities can be written and, when clipped to the objectives and pre-test, will constitute the earliest version of an instructional package. The activities may simply be to read in a textbook or do certain problems in a workbook, but the fact of having the directions in his own hands will let the student go at his own pace.

As time, experience, and money allow, the number of activities can be increased and the range of choices broadened.

VI

To sum up, individualizing the curriculum can become a reality by using instructional packages. One hundred percent individualization will never be achieved because the variety of learning processes in humans is probably infinite, but a significant start can be made. With the cooperative help of teachers all across the land, we may see the day when each child is learning what he needs most, at a rate that he is comfortable with, through activities that he enjoys, all in the presence of teachers who can at last give their time to doing what is the essence of teaching: giving every student individual attention and helping that student learn the joy of learning.

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DEVELOPMENTAL LANGUAGE PROCESSES IN THE YOUNG DEAF CHILD

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At first glance it may appear incongruous for a psycholinguistic research paper on language development to be included in a section meeting on curriculum. However I think if we quickly examine the roots of current trends in both areas we definitely find a common origin and cause. Today in the area of curriculum development in deaf education, as well as education in general, the emphasis is on individualizing or tailoring the learning content and experience to the needs of the individual child at particular points of time in his development. This thrust is unquestionably mirrored in this meeting. Similarly in the areas of cognitive psychology and psycholinguistics interest has turned to the investigation of the unique properties of man which equip him to learn and develop certain competencies from interacting with his environment. Historically, these parallel foci evolve from the recent realization by both psychology and education that the human infant is *not* a "blank sheet of paper" upon which parents and teachers pen indelible tracings to be absorbed and then re-transmitted. Both of our field's experiences with children have taught us that we do not teach a child all that he learns and conversely he does not learn all that we teach.

Since psychologists cannot explain how a child learns all that he knows and since education must face the frustration that the child does not learn all that he is taught, we are forced to turn our attention to the fascinating saga of child development. We have jointly recognized the probability that there is an orderly sequence of development which is universal for the human organism, but that there are individual differences in the rate of growth or the time schedules on which children move through this maturational sequence. This discovery is especially pertinent for psycholinguistics and deaf education. Hours of running subjects on memory drum studies have taught me that stimulus-response contingencies even with semantic generalization cannot account for the knowledge a speaker of language possesses. Likewise those glaring fourth grade figures in the Babbidge report (Babbidge, 1965) have convinced you that deaf children cannot all be forced through the unyielding mold of the Fitzgerald key for some inexplicable reason, despite the key's ideal pattern and your ingenious efforts. Thus without further elaboration on our separate and collective experiences, I think it becomes obvious that an exploration of the developmental language processes in the young deaf child is indeed critical to individualizing curriculum for all deaf children.

The profession of deaf education is by no means a stranger to the recent findings of psycholinguistics. In an excellent paper presented at the National Research Conference on Behavioral Aspects of Deafness in 1965 and published in the Volta Review in 1966, David McNeill spelled out the then revolutionary views on language acquisition. Although I recommend that you go back and re-read McNeill's paper thoroughly, let me review the major points. Children have a general capacity to acquire language; this capacity appears to stem from a distinctly human innate predisposition. With this capacity children construct grammars based on scanty information received from the sea of unsystematic language in his environment. These grammars which the child constructs are called generative. They consist of a set of hierarchichal rules. With these rules and a vocabulary of words used in his environment, the child is able to generate novel utterances never heard before. In contrast to previously proposed S–R models of language, children do not simply learn all their utterances by imitation. Moreover, as McNeill explained, there is a distinction between a speaker's competence and performance. Competence is what a person knows about language, while performance is his use in actual talking or listening. Competence is the invisible underlying structure; performance is the visible end product. In acquisition of language competence, normal children appear to progress through an orderly sequence of linguistic patterns. At each of these levels, children employ grammars which differ from adult grammar. These child grammars are not merely poor imitations of adult grammar but rather characterize the distinctive set of rules within the child's competence. McNeill traced linguistists' knowledge of these levels. In addition McNeill hypothesized that there are critical learning stages for language acquisition. The capacity appears to reach a peak between the ages of two and four and then declines. It may even disappear with the beginning of adolescence. In concluding, McNeill proposed expansion as a model for educating deaf children and urged an early beginning.

Since McNeill's paper, frequent references to psycholinguistic research are found sprinkled through the literature. The works of Chomsky, Brown, Ervin, Braine, and Lenneberg were obviously being read and pointed to as having significance for deaf education. More recently, Moores (1970 a) retraced the development and major points of psycholinguistics and discussed the implications for deaf education. He further reported a "cloze" procedure study of the psycholinguistic functioning of deaf adolescents (Moores, 1970 b). Lenneberg (1970) discussed the biological basis of language in a 1970 Annals paper. Through his work (Lenneberg, 1964) he has emphasized and explored its relevance to language development in the deaf.

With these articulate papers and the enthusiastic interest of deaf educators in psycholinguistics, the question of why there is still so little understanding of the theories and so little impact in educational practices naturally arises. Several factors may be responsible. One barrier lies in the nature of the problem itself—language and its speakers are extremely complex entities, and any theory which can account for them must of necessity be equally complex. Whereas a stimulus-response model of language learning was a rather simplistic one and had no concern for what was inside the little black box, the more recent generative model brings into play biological considerations and the cognitive processes which underlie language. Consequently this richer but more complex model requires a broader knowledge of psychology and linguistics for complete understanding. The formal description of language proposed by Chomsky (1965, 1967) does not even purport to represent psychological reality. Therefore, it has been extremely difficult to devise meaningful studies of its hypotheses with human subjects and to decipher its implications for practical application. Until recently it seemed to tell us more about what could not work than what could work.

Another problem which is generally true of any field at any time is the lag between theory and application. We seem to be gradually moving toward adaptation to a paradigm the tenets of which were proposed several years ago. To those who ride the fore-waves of such revolutions, the lag is quite apparent. In 1966, the same year of McNeill's paper, Dr. Harriett Kopp acknowledged a central implication of the new psycholinguistic research and voiced this concern in the following statement: "The capacity for learning language may be maximized during the first few years and probably decreases sharply with the passage of time. How can we provide systematic exposure to necessary sensory and cognitive experiences during the first three years? What is the value in early identification of deaf infants, if we cannot supply a rigorous program of carefully controlled learning sequences to be used in the home to develop sensory perceptual skills and cortical functioning during the optimal period of neuro-physiological and social readiness?" (Kopp, 1966)

Still another impediment in the progress of psycholinguistic findings' impact on deaf education was the "state of the art" of research in deaf children's language as well as language in general. In that previously mentioned 1966 Volta Review monograph on *Language Acquisition*, Robert Cooper and Joseph Rosenstein (1966) reviewed the work of an era of research which they predicted was coming to a close. They recognized the new questions being asked and investigations of children's language, and deplored the limited usefulness of most previous studies of the language of deaf children . . . "because the data have not been related in any meaningful way to what deaf children know about language." (Cooper and Rosenstein, 1966) They optimistically pointed to the work of child language researchers such as Braine, Brown and Bellugi, Miller and Ervin, and Menyuk with the hope that their methods would be extended to studies of deaf children's language.

As prophesied, this influence did emerge in research with language learning of deaf children. One group which pursued this endeavor were the Blanton, Nunnally, and Odom research team at Vanderbilt. Supported by a Vocational Rehabilitation Administration grant, this group began in 1964 to study "Psycholinguistic Processes in the Deaf." In a 1967 report, Blanton, Nunnally, and Odom (1967) discussed the views of language learning based on a set of innate systems with which children hypothesize and test language rules to form their grammars of their native language. They then raised a crucial question—do deaf children possess and utilize these same systems? Their experiments had indicated that rule learning was a rather weak tendency in the deaf. They stated that most of the deaf subjects appeared to expend most of their effort in learning individual items rather than acquiring rules by which further items might be inferred. This question underscored the "ifs" which had previously preceded any statement dealing with implications of psycholinguistic studies of hearing children, for deaf children. Although the assumption was generally accepted that deaf children possessed the same innate predispositions for acquiring language and that they must utilize them in a similar though impoverished way, there were no investigations to support this assumption. Since this question seemed vital to me, it provided the impetus for my doctoral dissertation carried out with the Blanton, Nunnally, Odom group and a psycholinguistic researcher, Jim Koplin at Vanderbilt. The reporting of this study (Burroughs, 1969) to you may help to strengthen the case for psycholinguistic relevance to the problem of language acquisition by the deaf.

In a 1968 study of sentence comprehension in hearing children, Huttenlocher, Eisenberg, and Strauss (1968) had found that passive sentences required longer processing latencies than active ones. Within each of these categories, sentences with perceived actor-logical subject disagreement took longer to process than sentences with perceived-logical agreement. Although it is questionable that competence features can be inferred from performance, these measureable differences seemed to reflect qualities expected from a theory of transformational grammar. Studies referred to previously and those of Miller (1962), Gough (1965, 1966) and Slobin (1966) yielded evidence to support the hypothesis that speakers of a language perform transformations on sentences which they comprehend and that the time required for such processes is measureable. Thus this comprehension task appeared to present a novel means from which to make inferences about the nature of a child's grammatical competence.

If this phenomenon is a reliable feature of the competence of hearing speakers of language, then these same measures should be applicable to the competence of deaf children. Since deaf children do not hear spoken language, it is possible they do not acquire the features of competence which are characteristic of the hearing child. It had been hypothesized that the deaf may encode isolated sentence elements in temporal order rather than process sentences according to hierarchical syntactic rules (Blanton, Nunnally, and Odom, 1967). The lack of this ability to transform sentences might be a significant factor in the deaf child's characteristic difficulty with reading and speaking. Moreover, until such investigations of deaf children's linguistic performance and competence have been made, the applicability of language acquisition studies with hearing children to deaf children is questionable. Thus the purposes of this study were: 1) to replicate the Huttenlocher differences among latencies for the four sentence types in a comprehension task with hearing children; and 2) to extend this task to include deaf children in order to gain knowledge about their linguistic competence.

Forty-eight hearing subjects from fourth grade classes and thirty-six deaf subjects selected for approximately fourth grade reading level (as measured by achievement tests) were used. The deaf Ss came from three educational orientations: finger-spelling (Louisiana School for the Deaf); oral (Callier Center); and combined (Texas School for the Deaf).

Slide 1

The subject's task consisted of reading a sentence shown to him on a screen and then placing one toy in relation to another as the sentence described.

Slide 2

The toy which the child held in his hand (mobile toy) was always the perceived subject, while the toy already placed in the track before him (fixed toy) was the perceived object. The sentences presented to the subjects were of four types:

(1) active statements with mobile toy as grammatical and logical subject;

Slide 3

(2) active statements with mobile toy as grammatical and logical object;

Slide 4

(3) passive statements with mobile toy as logical subject and grammatical object;

Slide 5

(4) passive statements with mobile toy as logical object and grammatical subject

Slide 6

Two sets of sentences were constructed: one used green and red trucks; the other used black and white dogs. Three presentations of these eight sentences were shown to each subject. Subjects were tested individually. Instructions were given orally to hearing subjects. To the deaf subjects they were conveyed by speech-reading, finger-spelling and sign, gestures, and printed cards in whatever way was necessary for the individual child's understanding. Two practice trials assured that the subject understood the task before experimental trials began. The experimenter recorded sentence reading latency, object placement latency, total latency and errors.

Slide 7

Results showed that the Huttenlocher, et al. (1968) finding of increased latencies across the four sentence types was replicated when trucks were used but not when dogs were used. This finding stresses the importance of the interaction between syntax and semantics in the current theory of transformational grammar. (There is a difference between trucks pushing trucks and dogs chasing dogs; and this semantic difference affects the syntactic relationships.)

More important for our interests, the deaf subjects' performance revealed that they required longer latencies than the hearing subjects but that their patterns of relative latencies among the four sentence types were the same as those of hearing subjects. In other words, although it took them longer, they appeared to use the same processes. The differences are quantitative, but not qualitative. This finding suggests that deaf children have the same kind of transformational processes as part of their language competence as do hearing children when comprehension of written sentences is assessed.

Evidence from other studies supports this general finding of quantitative rather than qualitative difference. Within the past week, Dr. Penelope Odom has conveyed to me results of a recently completed study that will be published soon. On a comprehension task where subjects were required to rate anomalous simple declarative sentences for sensibility and then change one word, performance of deaf subjects was identical to that of hearing subjects. This testing of base structure knowledge yields further strength to the above findings. Although these studies utilized older deaf children, their implications support the hypothesis that young deaf children possess the same language competence features as hearing children. An investigation of "Early Speech Development in Deaf Infants" by Lach, Ling, Ling, and Ship (1970) indicates that the phonological development followed the patterns described in normal infants. Studies of deaf children of deaf parents underway by Bellugi and Moores may yield even further support. Such findings add strength to the relevance of psycholinguistic theories for deaf children as well as increase our knowledge of what deaf children learn in language acquisition. They point stringently to some implications for the field of deaf education. We at the Callier Center feel that we are compelled to attend to these implications and model our program and curricula accordingly. Although we are only beginning to scratch the surface, let me share some of our current directions with you.

Acknowledging the crucial implications of critical stages for language learning, our prime goal is early identification and educational beginnings. Underpinned by our clinical audiology staff's expertise in infant testing and by a growing awareness among our medical community, we are identifying hearing losses at increasingly early ages—most at the 6 month to 2 year level. The top priority of our Center is to get sound to the infant and stimulate his auditory system through proper amplification. The vehicle for immediate intervention is provided by our Infant Home Training Program directed by Susan Mann. Work at this level is with the parents, and the guidelines are based solidly on psycholinguistic principles such as those described by McNeill (1966, 1970), Menyuk (1969), Lee (1966) and others. The idea is to allow the deaf child's language acquisition device to function and progress through the normal developmental linguistic stages. To facilitate this progression parents are taught to talk to their deaf child at the grammatical level one step above the child's current level of functioning. For example, if the child has currently developed to the holophrastic stage where he uses single words to stand for sentences or commands, such as "ball!" meaning "Give me the ball!" the parent constantly responds to him in the pivot-open level such as "give ball!" or "throw ball!" This is an attempt to allow the child to receive sufficient language samples upon which his linguistic competence may operate and move from level to level. Since the deaf child does not appear to be able to grasp such data from the extensive adult grammar, that is, his limited sensory input cannot sufficiently comprehend enough of adult grammar to operate upon, the linguistic samples provided to him are thus reduced or transformed to be within his comprehension. Since time does not permit me to describe this approach in greater detail, I urge you to write Susan Mann at Callier for more information if you are interested.

Another important thrust involves the provision of a developmentally based curriculum once the child actually enters preschool around the age of three. Unless the child is allowed to continue to develop at his own rate, all of the best efforts of infant training will be obscured. Equally essential is the recognition of uneven rates of development among an individual child's various abilities. This may be especially true for deaf children. Thus you can see the need which led Virginia Herzog to tackle the tremendous task of preschool curriculum which she will share with you in a few minutes.

One other point seems apparent. Language development for the child who begins at six or who may have multiple handicaps presents a totally different problem. Children in this category are not only forced to face language acquisition with faulty equipment, they must also attempt it at a time in life when readiness for that task may have passed. Many new approaches such as the increased audio-visual aids, programmed learning materials, computer assisted instruction, etc. hold new promise. Recent Piagetian findings and their translations for deaf education and education in general by Hans Furth (1966, 1970) provide major considerations for educational strategies. The key to the effectiveness of all of these strategies appears to me to lie in such systems for individualizing instruction as will be discussed by Frank Powell.

As far as my job as a clinical psychologist and psycholinguistic researcher in a hearing and speech center—the setting is ideal in allowing me to observe needs, look for answers, and feedback results within the applied setting. It is through such daily interaction that psycholinguistic research and deaf education can most effectively meld into an effective force in the development of children. As a researcher, I am faced with a multitude of questions—What is the most effective medium for getting language samples to deaf children? What are the critical components of language? What are the implications of cross-modal transfer for language learning? How can we effectively measure language levels in deaf children in order to identify their individual curriculum needs? The unanswered questions about various aspects of deaf children's linguistic competence still remain. Within all of this, as a clinician, I am forced to back off daily and look at our kids and ask: as a result of or in spite of what we are doing,—can this child communicate in some meaningful way with his family and peers?—is he experiencing himself as a valuable individual?—is he gaining the skills, flexibility, independence, and self-direction to move freely in his environment?

In conclusion, I wish to re-emphasize four major points.

(1) recent psycholinguistic research reveals that a speaker of language possesses a set of hierarchical rules about sound, meaning, and

syntax that allow him to generate an infinite number of well formed sentences of his language;

(2) children come to possess these rules of adult grammar by progressing through a series of child grammars which are unique rather than merely poor imitations of adult grammar and there is an optimum stage for this language acquisition;

(3) deaf children appear to develop linguistic competence, as seen in comprehension task performance, that is qualitatively similar but quantitatively poorer than that of hearing children:

(4) thus deaf education can and must inculcate the findings of psycholinguistics into curricula beginning prior to the critical stage for developing language competence and culminating in generative language performance.

TABLE I—FOUR SENTENCE TYPES (SLIDES 3–6)

(1) The red truck is pushing the green truck.*
(2) The green truck is pushing the red truck.*
(3) The green truck is pushed by the red truck.*
(4) The red truck is pushed by the green truck.*

*Red truck is mobile toy, perceived actor; green truck is fixed toy, perceived object.

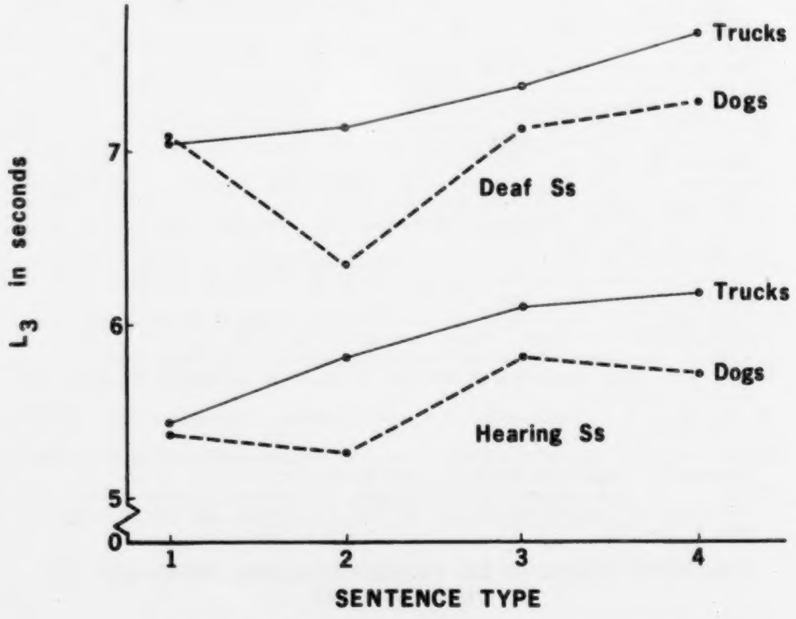

Fig. 1 Object X sentence type interactions for L_3 all subjects.

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INDIVIDUALIZING LANGUAGE CURRICULA

Frank W. Powell, M.S., Callier Hearing and Speech Center
Pilot School for the Deaf, Dallas, Tex.

The day has been spent in discussing Individualized Instruction and Curriculum Development. Several different approaches have been explained and amplified. Each discussion, I feel sure, was the product of program change and brought about by the influence of educational technology which is now beginning to nudge us into more action. It is evident by now that the complexity of curriculum design and implementation of a program of Individualized Instruction for deaf children is not an easy task or one that is done in the well known summer workshop. The two people who have preceded me today from Callier Hearing and Speech Center—Pilot School for the Deaf—have reported on segments of an educational system which has been designed by the staff of the Individualized Instruction Project under the direction of Mr. Carl Nordwall. This project is going into its third year at the Pilot School and is funded by Media Services and Captioned Films in the Bureau of Education for the Handicapped. My responsibility today is to give you an overview of this program and relate it to the published topic — Individualizing Language Curricula.

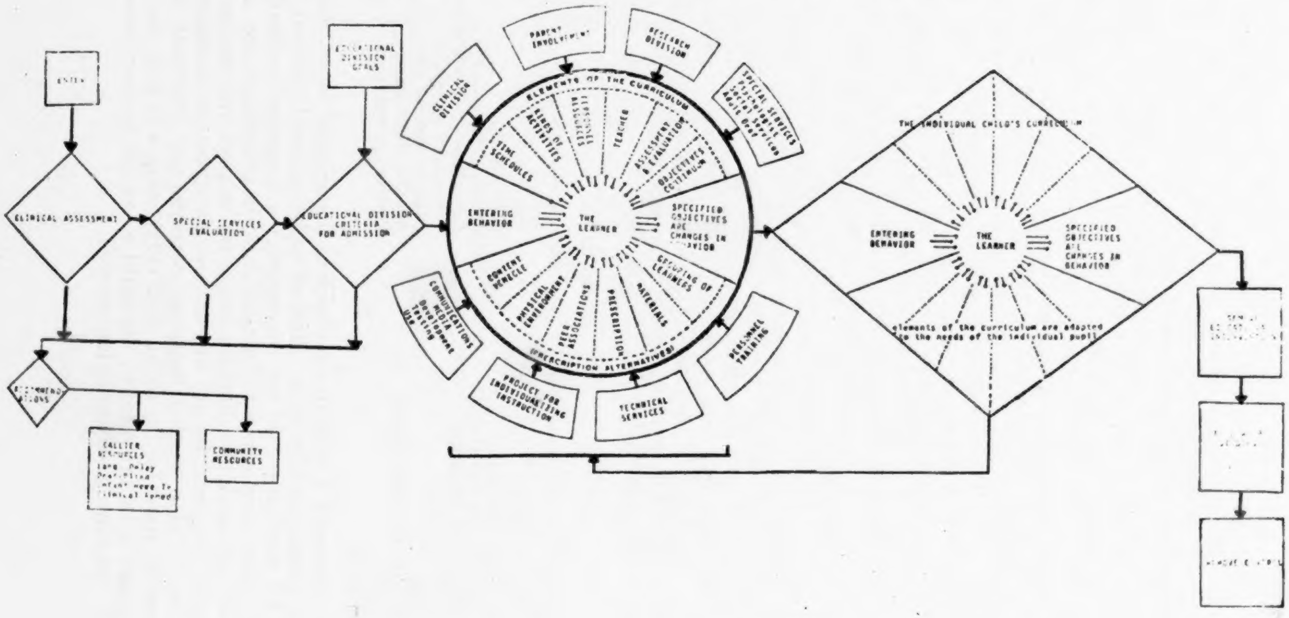
For our purposes it was necessary to define the two major components of the project as (1) educational systems and (2) individualized instruction. These are the definitions we use: *an educational system* is how all people, activities and things in the school environment work together for some purpose. Our purpose naturally is providing an individualized program for our deaf students. *Individualized Instruction* is defined as getting the appropriate alternatives and learning experiences in the school to accommodate the needs of the individual child.

Using definitions as open as this, we find that we must critically analyze all things that would tend to influence the learner. To do this, we designed a model called The Callier Educational System which I will display in transparency form to help explain how we have attacked our job of implementing the project. Before getting into this, I feel compelled to say that we have come to realize the difficulty of the task we have undertaken. It is particularly painful for most of us who are tradition bound to re-orient our thinking and re-educate ourselves to a systems approach.

You have heard our rationale for re-shaping our curriculum for pre-school children. This relates to our Individualized Instruction Project directly since we are looking at the individual child in developmental stages and in a child-oriented curriculum. This preschool curriculum at this time is as a preparation time for the child so that when academic subjects become our major concern, we will have some information about how he can handle it.

In trying to describe our activities at the primary and elementary levels, we are again forced to look at what we are outlining for the child to learn. If we decide to individualize and really mean it, we can no longer take the standard curriculum which has evolved, mediate it, and think we are individualizing. We also cannot write paper and pencil programs on isolated concepts and think we are individualizing instruction. We must look at the whole process and design an educational system to understand all the variables which influence the learner. (Figure 1)

Figure 1 - THE CALLIER EDUCATIONAL SYSTEM



Here is the monster—the systems model of which I have spoken. I will concentrate on the center portion since this is the most demanding. In essence, we are looking at a school, the curriculum and the learner. If we can properly implement this portion, then we have set the stage for Individualized Instruction.

In this system, we are identifying all of the elements which act on the learner. We hope we have thought of everything. In examining these 12 elements, we have found one which seems to exercise control over most of the others in the sub-system—this element is—objectives continua. Objectives continua seems to be the starting point in building curriculum. In determining objectives continua, you are providing sequential structure—scope and sequence of what is to be taught and also providing a realistic way to measure progress and a way to determine where along the continuum the learner is. To write objectives continua in behavioral terms, we have pre-test and past test information. We have identified the following areas of concern which will be included in the child's school program (Figure 2). We have written or are in the process of completing the objectives continua in these areas.

Once the objectives continua for these areas is established, the other elements of the sub-system will act as aids in the process of prescribing individually for each child. It is far too time consuming to discuss each element separately and it is not my intent to do so here. We also feel that Assessment and Evaluation are also a sub-system which shares equal importance with objectives continua. This involves knowing entering behavior as well as evaluating how well the child has met the behavioral objectives.

Figure 2

- **Communication skills (language):**
  - **Speech**
  - **Speechreading**
  - **Auditory training**
  - **Writing (expressive)**
  - **Generative grammar**
- **Academic subjects:**
  - **Math**
  - **Social skills and studies**
  - **Science**
  - **Reading**
- **Motor development:**
  - **Art**
  - **P.E.**
  - **Penmanship**
- **Perceptual development:**
  - **Visual-motor coordination**
  - **Perceptual constancy**
  - **Figure—ground perception**
  - **Spatial relationships**
  - **Position in space**

In summary, I want to come back to the original topic—Individualizing Language Curricula. Most of us have found that our resources are far too limited to try to program a language curriculum. We know that language for the deaf child is something that cannot be stilted any more into formats, but must be alive and continuous. We hope by program design, we can provide structure necessary for the teacher to plan so that language concepts are presented in logical, sequential steps for the child. Individualizing will help the pertinent language to be provided to the child when his interest level is at its peak—providing we have planned well.

INDIVIDUALIZING LANGUAGE CURRICULA

Virginia Herzog, M.A., Callier Hearing and Speech Center,
Dallas, Tex.

Curriculum has been a major concern of educators of the deaf for decades. Now with the vastly growing population of pre-schools and infant training programs, it seems that many schools are without adequate curricula to meet the needs of the young child. After reviewing curricula from other schools, it appears that material written for beginning 6-year-old deaf children has been lowered with the expectations of having 3-, 4- and 5-year-old children fit that mold.

Our concern for the development of a new curriculum evolved for several reasons. Probably our first concern arose from the slowness and/or lack of receptive and expressive language acquisition in our population. Our 5 and 6-year-olds, who have been in school 2 and 3 years, are functioning ahead or at age level in non-verbal tasks and have a greater visual attention span. They display better adjusted behavior patterns, but they do show some visual motor problems. As far as language is concerned, these children are not up to par in language structure.

The curriculum we were using was non-functional as far as being useful for our teachers. It did provide a list of words, primarily nouns, and a list of speech elements, but it definitely was not child oriented. Generally, it was felt that one of the main causes for this lack of language acquisition was expecting 3, 4 and 5-year-old children to function as 6-year-olds. This raised the question, "What can be expected from a 3-year-old 'normal hearing child'?"

During the past school year, the population of our pre-school department has doubled over the 1969-1970 school year. The 1969-1970 school year showed us to have a population of 81 students, while the past year showed us having a population of 162 students with 26 of these being enrolled in the Infant Home Training Program. The influx of these children placed great demands upon our physical plant, requiring us to make modifications of some classrooms and it made even greater demands on our staff.

From these areas of concern has arisen our need for a curriculum providing more than just a list of words and speech elements. Before we could start on a new curriculum, we had to assess what we had and what we wanted. We came to the decision that we needed a curriculum to provide not only experiential type activities for language development, but also for the development of cognitive skills and social-emotional development. It was decided that the curriculum should provide for the individual needs of each child and for a flexible and an unstructured environment.

The best way to answer some of our questions and to lay a foundation for our curriculum seemed to be to research the literature in the areas of psycholinguistics, child development and Piaget. Since a number of the children in our population are disadvantaged or deprived, it was deemed necessary to research the literature in this area.

Research of the literature in child development was our starting point. Information on the following age levels was compiled: 18 months, 2 years (24 months), 2½ years (30 months), 3 to 4 years, 4 to

5 years and 5 to 6 years. It was my feeling that it was necessary to collect data on the 2½ year old child because a time span of 6 months between 2 and 3 years of age can provide many developmental changes. The rationale for gathering information on the 18 months old child was based on data that Dr. Burroughs had collected in her testing of our entering population. Her data seemed to reveal that our population showed some lag after 18 months in motor development skills particularly in the area of position in space. In verbal language development, a plateau seemed to be reached at 9 months. Non-verbal and cognitive skills seemed to follow the range of the hearing child; however, some lags were evidenced because of a larger percentage of emotional overlays and behavioral problems. Some of this lag may be due to the lack of exposure to various activities. A delay was shown in self help skills which may be related to parental attitudes. These findings were based on data from the Denver Developmental Screening Test.

At this point, I think that I should explain that this curriculum is being written for children falling within the ages of 3 to 6. The majority of our entering children are age 3. As Dr. Burroughs has explained, Susan Mann, our teacher in the Infant Home Training Program, is using a psycholinguistic approach with her children. It is our hope that children coming out of her program at age 3 will be able to proceed through the curriculum faster, while those children entering for the first time at age 3 may have to move at a slower pace, thus requiring a more flexible curriculum.

Information was collected from approximately 9 different sources on child development plus a separate summary of readings on Piaget. This information was classified into categories of motor development, fine motor-adaptive skills, personal-social development, language development, play, moral behavior, cognitive and volitional behavior. The language development category was divided into sub-categories relating to time concepts, classification concepts, space concepts, number concepts, sentence structure and speech. Included in the compilation are lists composed of the characteristics of the child as a person and the needs of a child at these various age levels. Not to be forgotten is the approximate attention span of a child at the different ages (Figure 1).

This transparency briefly explains how the information was compiled and it shows an example of some of the categories and subcategories. I have selected the 3- to 4-year-old child for this presentation since this is where we are starting. This transparency is a condensed version of our original compilation. Not all of the categories, sub-categories and sources are included. One representative activity, for these categories presented, has been selected. At the top and running across the page are noted the sources. Denver Developmental refers to the screening test by that name. Smart and Smart makes reference to the authors of the book, *Children: Development and Relationships*. Dr. Mead was an instructor at Michigan State University and her data were gathered in conjunction with work at the Merrill Palmer Institute. The information from McCarthy and Poole was also collected by Dr. Mead. Gesell's information came from *Developmental Diagnosis*, co-authored by Catherine Amatruda.

Other sources were Berry and Eisenson's *Speech Disorders;* Haeussermann's *Developmental Potential of Pre-school Children;* the *Communicative Evaluation Chart* and the *Office Evaluation of Development* at the Medical College of Virginia Pediatric Outpatient Department. This format was used so that a broad scope could be made of the agreement among sources. If there appeared to be disagreement among these sources regarding the ages for the development of some activities, this was noted by including the age at which other sources felt the activity was developed. An example of this is exhibited in the area of personal-social development.

FIGURE 1.—CHILD DEVELOPMENT

[3-4-year-old child]

	Denver Developmental	Smart and Smart	Mead	McCarthy	Gesell	Poole
Motor development:						
Balances on 1 foot 1 second	X		X		X	
Fine motor-adaptive:						
Imitates vertical line within 30 degrees	X		X			
Personal-social:						
Puts on shoes, not necessarily on correct feet	2½		X		X	
Language development:						
Repeats 3 digits			X		X	
A. Time concepts:						
Knows night and day			X			
B. Classification concepts:						
Classify color		X				

The complete compilation from ages 18 months to 6 years was presented to the pre-school teachers. The teachers were quite receptive to the information and seemed to feel that it would be valuable in the development of a new curriculum. Some of the teachers have put this information to use the past semester and have found it helpful to better understand their children. Some of these teachers have found that they were expecting too much from their children, while others have not expected enough. Not only that, but it has aroused an interest in these teachers to do some reading on their own.

This compilation of information, Piaget's writings and psycholinguistics are being used as the foundation for our new curriculum. We are not trying to make our children normal, but we want to give them the opportunity to develop as normally as possible at age level, rather than making them mature faster or possibly retarding their development in some areas. We want our children to have the opportunity to be children.

A skeleton of one unit has been completed. After this unit was begun, it was wished that some other topic had been chosen. I am not satisfied with this one, but it does represent the basic format for our curriculum (Figures 2, 3).

As you will note, we are using maturity level rather than chronological age. Our rationale for this is based on the fact that many of our children chronologically are not mature for their age level. For example, we may have an entering 6 year old, who is mature in the area of motor skills, but he may be immature in language development. It is hoped that by providing a flexible curriculum, this child would be able to fit into the curriculum at his maturity level in both areas. At the beginning of each unit, will be the Developmental Rationale for that unit. You will note that self-concept is being used as the rationale for this unit. The behavioral objectives are written more as a guide for the teacher to determine where she should set her sights. Each teacher will probably have to write her own behavioral objectives for each individual child. Language is the foundation leading to all other activities developing cognitive skills, communication skills, perceptual skills and motor skills. A section for suggestions to parents will be included. This is being done particularly to aid the first year teacher with her parent classes. Each unit will be followed by units at the 4-year-old level and the 5-year-old level, reviewing the 3-year-old level and expanding the appropriate language at the 4- and 5-year-old levels. One of the teachers has suggested that motor skills and perceptual skills be directed to teachers' aides so that the classroom teachers will have more time for individual work with each child. This approach appears to be most feasible.

FIGURE 2.—MATURITY LEVEL; 3 YEARS[1]

Unit—Parts of the body

Developmental rationale:
For the development of a healthy emotional and physical self-concept. To develop an awareness of each individual's existence, his conception of who and what he is.

Behavioral objectives:
(1) Given the following sets of body parts on picture cards: Eyes, ears, toes, arms and hands, the child will match the sets.
(2) The child will discriminate 8 of the 12 nouns receptively.
(3) By means of receptive language, the child will demonstrate his understanding of the following action verbs: Walk, run, jump, stand up and sit down.

Content areas	Instructional materials (suggested materials)	Activities (suggested activities)
Language (suggested vocabulary):		
Nouns:		
Nose.		(a) Receptive (speechreading).
Eye (eyes).	Flannelboard.[3]	Use the vocabulary appropriate for the child.
Hair.[2]	Instructo set	
Ear.[2]	My face and body.	Have the child assemble or disassemble the face or body on the flannelboard.
Verbs:		
Walk.		
Run.		
Eat.		
Adjectives:		
One.		
Two.		
Pronouns:		
I.		
Me.		
Expressions:		
Wash your hands.		
Brush your hair.	Dolls.[3]	
	Brush.	Have child brush and comb his hair and doll's hair
	Comb.	Write experience story.
		(b) Auditory training.
		(c) Expressive.

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[1] Suggested maturity level, not chronological level.
[2] Homophenous words—teach separately.
[3] Denotes materials for teacher and child use.

In-service training will be a must to assist the teachers in understanding and using the curriculum. It will also be necessary to provide training to familiarize the teachers with the psycholinguistic approach to language development and what expectations they should derive for their children. Many of our teachers are going to have to change their ways of thinking. Rather than demanding, "May I go to the bathroom?", they will need to be able to accept language phrases such as; "Bathroom?", "Go bathroom?" or "I go bathroom?". Since part of our job is to teach communication, we should be accepting and encouraging of all attempts to communicate by the young child.

Dr. Burroughs and I plan to devise a developmental inventory from the information that has been compiled. It is our hope that the teachers will be able to use this as an assessment tool at the beginning of the school year to establish the strengths and weaknesses of their children and then proceed through the curriculum on the basis of these strengths and weaknesses.

We are not saying that our approach is a panacea but we are going to give it a try. Presently, it appears to us to be workable.

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TUESDAY, JUNE 29

Federal Programs—ASB Dining Room

Chairman: Dr. Frank B. Withrow, Director, Division of Educational Services, Bureau of Education for the Handicapped.

10:30 a.m.–11:45 a.m.: *Film*—Dr. Sidney P. Marland, Commissioner, U.S. Office of Education, Department of Health, Education and Welfare; *"Federal Programs for the Handicapped,"* Dr. Frank B. Withrow, Director, Division of Educational Services, Bureau of Education for the Handicapped.

1:30 p.m.–4:00 p.m.: *"Preschool Education for the Deaf,"* Jane DeWeerd, Education Program Specialist, Early Childhood Education for the Handicapped, Bureau of Education for the Handicapped; *"Career Education for the Deaf in the 1970's,"* Malcolm J. Norwood, Assistant Chief, and Ernest E. Hairston, Education Program Specialist, Media Services and Captioned Films, Bureau of Education for the Handicapped.

FEDERAL PROGRAMS FOR THE HANDICAPPED

Dr. Frank B. Withrow, Director, Division of Educational Services, Bureau of Education for the Handicapped

What is the role of the Federal Government in education, rehabilitation, social services and employment with deaf individuals? For well over a hundred years the Federal Government has shown its interest in handicapped people. This was most obviously developed through its support of Gallaudet College for the Deaf and the American Printing House for the Blind. One might ask why the Federal Government entered this field of education? Was it because of the humanistic interest in these people? Was it the acceptance of Federal responsibility for a part of education? Undoubtedly the humanistic interest in deaf individuals was enhanced by the excellent Congressional testimony presented by deaf individuals which undoubtedly influenced Congress. The establishment of Gallaudet College was a significant precedent for the relation of the Federal Government and education.

It established a concept that the Federal Government was interested in this group of handicapped people. If it had been a total interest one might ask why elementary and secondary schools for the deaf were not also funded at this time. Since only the college was established at the federal level, we must conclude that the central issue was one known as "economics of scale," i.e., only the Federal Government has the resources to provide a college for the deaf. Another way of stating this is that the number of deaf persons eligible to receive a college education was small, the cost to the individual was high—so high that it was unrealistic to expect either State, local or private resources to provide such education.

I am mentioning "economics of scale" since it is the principle behind the ultimate justification for all educational legislation for Federal support for the handicapped. It is important to note that, at this time in our history, the Federal Government has no commitment to basic education. All Federal funds for education are "earmarked" for redressing inequities within local and/or State funding patterns. They all assume a lack of services because of economic nonfeasibility from the State or local standpoint. For example, without assistance Little Rock could not afford a vocational education program for 50 or so handicapped children. It is important to note this relation of the Federal Government to education since the Federal education expenditure is by definition only expended for high risk venture. By its very nature, therefore, the Federal Government is a junior partner in the educational community. For example the Federal Government's share of education is between 6 to 7 percent.

In light of this traditional posture, we can now begin to look to changes that may be in the offing. President Nixon's special education and general revenue sharing proposals have as an implicit underlying concept a new role for the Federal Government. This new role would be a non-categorical sharing of revenue for basic educational needs.

A state would be able to determine exactly where the money would go and what it would be used for, while theoretically meeting the most urgent educational needs of that particular state. Undoubtedly, this kind of new responsibility would mean a greater and intensified cooperation between Federal, State, and local programs. This should result in mutual planning across many agencies. Education of the deaf has been unique since it has taken place in many different institutions ranging from State residential schools, to city schools, day programs and private day and residential facilities. One of the major activities of the Federal Government is to provide a vehicle for planning that includes all agencies. The goal of planning is not necessarily to determine what the specific State school for the deaf can do nor what the city of Chicago can do for the deaf child but rather what the entire State can do with all of its resources—educational, rehabilitation, medical, and welfare, services for deaf people. This is a positive step forward, perhaps the most positive aspect of the entire Federal involvement with education of the deaf. We no longer have the luxury of simply looking at the world from our own parochial viewpoint of the school or class that we represent; today we must work with the total resources that are available within the States and across States. An example of "across States concern" is with the discrepancy that exists as some States report serving upward to 80 percent of their handicapped children while other States report serving less than 20 percent. It is impossible for us to maintain a program that allows the happenstance of geographical location to make the probability of education for a handicapped child four times greater in one State than in another. For this reason, the Federal Government will take a more active hand in these highly inequitable instances. This is most obviously seen in extremely severe multiply handicapping conditions such as the deaf/blind. As many of you in this room know there are 10 Federally sponsored Deaf/Blind Centers operating on a regional basis throughout the United States. This is justified on the basis that education for this kind of child is extremely expensive. An expense that probably no single State can afford to pay and certainly no local agency can long bear the costs. The Federal Government has accepted the responsibility of providing as much total service for this child, and his family as a region will allow.

Even if a general educational revenue sharing program develops, as has been proposed by the Nixon administration, I would anticipate that certain categorical or catastrophic services such as the specific funding for deaf/blind centers, captioning of movies for the deaf, talking books for the blind, and other high risk activities would be maintained. Under the present Federal program there are two dichotomies, one deals with program discretionary money or that money that goes directly from the Federal Government to a local specific institution and the other is State formula grants. Examples of discretionary money for the handicapped are teacher training grants to specific universities and/or State Departments of Education, grants to support Captioned Films for the Deaf, research grants, grants that are made for specific areas such as Deaf/Blind Centers, Early Childhood Education Programs, Special Learning Disabilities Centers, and other special activities that are conceived of as being a prime catalytic responsibility of the Federal Government. You will hear about the Early Childhood program in more detail from Miss DeWeerd later on this program. The justification for an activity of this type by the Federal Government is that it can provide an example and leadership for States in an area which will enhance the educational programs for handicapped children.

Other Federal categorical funding State grant programs provided are based upon a number of different resources such as formula based upon population, i.e., the number of children between 5 and 21 years of age. The Title I ESEA program P.L. 89–313 that goes to State institutions is based upon the average daily attendance within that institution. Once the Federal formula program is established the money goes to the State agency and it becomes a competitive discretionary program within the States. Different institutions and different communities may have entitlements as in the case in Title I, however, in Part B EHA and ESEA Title III money may flow from a completely competitive discretionary operation with the decision point based at the State level. Vocational education utilizes a rather complex formula based upon the amount of effort that the community is putting into vocational education which is calculated on the counties, the tax base, population, etc. The choice or decision point in terms of people seeking money for specific projects in the programs is within the State Department of Education or other appropriately designated State agencies.

These programs are obviously not considered general revenue sharing. They are set aside specifically for the use of education of handicapped children. No money is sub-earmarked for categories of the handicapped, for example, no money must be given to schools for the deaf or schools for the blind. There must be, however, an overall plan that balances out an equitable service for all handicapped children over a period of time within the State. In other words, in Part B, EHA money could not all be expended each year for programs that have to do only with deaf children or mentally retarded children or emotionally disturbed children, some effort must be made to show that there is a balance of appropriateness in the utilization of this money.

It is our feeling that some of the greatest efforts that can be made on the part of Federal monies is the assistance in overall comprehensive planning on a statewide basis—overall comprehensive planning within the educational community with rehabilitation, social services and employment agencies. Most of my speech today has been pinpointed upon the educational justification and responsibilities of the Federal Government. The total responsibility for all services can be headed by any agency. We do have, I think, a major responsibility in education of the deaf to assure that each State is melding together its resources in terms of State residential schools, intermediate districts, and local services for deaf children.

It is intolerable for any State in this day and age to think of a schism between residential and day services. This is a question that is no longer viable in the 1970's. The question is what service can be rendered to deaf individuals. How can the needs of all of the children within the State be met on a cost-effective basis, and with a humanistic understanding that provides the best intellectual, social, and emotional climate for deaf children to grow. Someone will lead this kind of planning. Perceptive educators will be able to lead such activities. Narrow monolithic parochial isolation of educators of the deaf outside the broader community of educators will assure programs for the deaf of non-effective strategies in competition for the scarce tax dollars of the 70's. A broadening, open development of planning capabilities will assure the enhanced educational opportunities for deaf children. Innovation of the 60's was possible because of the increased money available. Educational innovation in the 70's will be marked by the reallocation of scarce tax dollars. This race will go only to those willing to do their homework.

PRESCHOOL EDUCATION FOR THE DEAF

Jane DeWeerd, Education Program Specialist, Early Childhood
Education for the Handicapped, Bureau of Education
for the Handicapped

Today I would like to speak about some areas of concern, some trends and some encouraging developments in early education for handicapped children as seen from my viewpoint. Since I am most familiar with the Handicapped Children's Early Education Program, I would like to describe some of the ways in which projects under that program, especially those concerned primarily with hearing impaired youngsters, are attempting to meet these problems and challenges.

First a few words about the nature and purpose of the Handicapped Children's Early Education Program. This program, now entering its third year, has as its purpose establishing demonstration projects, to make visible high quality, comprehensive services for handicapped children and their families.

The various projects are to demonstrate a variety of approaches, techniques, methods, groupings of children, and staffing patterns in a variety of administrative settings, and are to be distributed geographically as far as possible throughout the country, in rural as well as urban locations. Expertise from both special education and early childhood education is needed in each project. Each project is encouraged to provide for the continuation of its services, following the period of Federal support and it is that in addition, other agencies will wish to replicate some of the models demonstrated by the projects. At present there are 70 demonstration projects, 39 continuing from prior years and 31 new planning-operational projects, counting the National Urban League as 4 projects. In addition, this year some activities related to the program, such as technical assistance to the projects, evaluation, prevention, and outreach to day care and other agencies are being supported. The Bureau of Education for the Handicapped envisions the Handicapped Children's Early Education Program as catalytic, providing seed money and visible models to encourage the establishment of other projects by public schools and other agencies.

This program is of course only one of those in the Bureau of Education for the Handicapped providing services, training or research in the area of early childhood for handicapped children. The problems and changing circumstances affecting this program are probably similar to those many of you encounter in your various roles.

One of the problems which has faced educators for years is the shortage of services for handicapped children in rural areas. The provision of special services for very young children is made more difficult by their inability to be transported long distances. The Handicapped Children's Early Education project in Alaska was faced with this problem in acute form. Because of health and other underdetermined reasons the percentage of hearing impaired children in Alaska is unusually high and hearing loss is sometimes not noticed or is regarded as inattentiveness or lack of interest. One Eskimo mother we are told took one of her children to the clinic because he was the only one she had whose ears did not run. Our project in Anchorage decided to try to attack the problem of building a service delivery system in an enormous area where travel is uncertain and weather conditions changeable without many trained people (Alaska had 2 audiologists the last thing I knew, a 200 percent increase over the situation in 1969. We have heard that 2 more may be going there.) The only existing agency on which it was possible for them to build was Head Start. Over 40 of the Head Start projects in Alaska are now cooperating with our project, which trains native teachers and aides first in identification of children with hearing loss and refers them for medical attention. Five rural native Head Start programs are involved in a recently developed supplementary educational program provided within the regular program, and involving parents. A second phase of the project will establish via video tape and the forthcoming television an auditory visual training program for teachers and parents of the native preschool child. A third phase will be a tutor-cottage program in which parents and children with severe hearing impairment will spend a week, twice a year, for medical attention, hearing aid fitting and tutoring, with carryover help when they return to their regular preschool programs at home. Well-trained personnel are available for this aspect of the program.

This project is illustrative of the effort to use whatever is available, varying the plans for the situation. A new planning-operational project for deaf children at the University of Denver has just been funded. Rural children will come in for a week of intensive work, returning to their homes for continued assistance via correspondence course and unlimited use of long distance telephone. A mobile home will be furnished for use in tutoring in a home-like setting. Although this approach is not highly innovative, it will constitute a needed model for an area which has not had one.

The University of Alabama at Tuscaloosa has just been awarded a planning-operational grant to work with hearing impaired rural disadvantaged children and their parents to prepare the children for entrance into public school special education programs when they reach the ages of 3 to 6.

The University of Wyoming in Laramie is serving communication-handicapped children primarily through a summer residential camp program which includes parents, with follow-up in their home communities using local personnel trained in speech and hearing. This project, a newly funded one in Las Vegas and a project sponsored jointly by the Minnesota State Department of Education, the Minneapolis Public Schools and the University of Minnesota are providing State-wide services. The Minnesota project is extending services to rural areas by providing consultation to speech and hearing therapists and regional preschool programs throughout the State in conjunction with its demonstration home; its nursery school in which hearing and hearing impaired children are enrolled; the individual tutoring program; the classroom; classroom and the home visitation and parent education components. This project is the first of the demonstration projects to list as one of its objectives the writing of a State Plan for the provision of services for all young handicapped children, based on the State Plan for hearing impaired children previously adopted.

Not only the rural areas, but the inner cities present very difficult situations to those wishing to help young handicapped children. Understandable distrust for the establishment, transportation problems rivalling those of sparsely populated areas and bureaucratic obstancies are often added to the usual problems of providing services. The Mt. Carmel Guild in Newark, New Jersey is attempting to solve these problems by making the large parent-dominated advisory committee central to the planning and evaluation of the direction the project takes. In addition, liaison staff from the community have been hired. Projects dealing with inner city groups have usually found this essential. This project is serving as a practicum site for a training program at Rutgers University preparing personnel to work with disadvantaged handicapped children. The Mt. Carmel project, incidentally, has used parents so successfully in the classroom that it is difficult for visitors to distinguish them from the teachers.

The multihandicapped are a group for whom it has usually been the most difficult to obtain services. The Early Education project at the University of Nebraska in Omaha serves multihandicapped children, and cooperates with a program assisting deaf-blind children, as does the project at the University of Washington in the Experimental Education Unit. A new planning-operational project at the Langley Porter Institute, University of California in San Francisco will serve deaf-emotionally disturbed children, a group for whom services have been especially lacking. The production of materials for use by other programs is one objective of this project.

Applications submitted to the Early Education Program indicate that the trend to wish to serve heterogeneous groups of children with problems is accelerating. There is a concomitant trend to refusing to label children, especially young children, to avoid the self-fulfilling prophecy effect, and instead to look at the things the child can and cannot do. The Houston Hearing and Speech Clinic project follows these procedures.

Another problem is of course the shortage of personnel trained in both special education and early childhood education and the shortage of personnel trained or experienced especially in work with parents, particularly parents of infants and very young children. It has been our experience that it is rare to find people whose background provides them with an understanding of the special needs of handicapped children and the skills to meet these needs coupled with an operating understanding of child development. Frequently we see professionals trained in special education trying so hard to help a child that they ask him to do things too advanced for his developmental level—use language that a hearing child of the same age would not be expected to be able to generate or sit still attending to a task for long periods, for instance. It would appear that information from classes taken in child development or early childhood education may have been compartmentalized, and not really absorbed and melded with information from special education.

As more and more younger children become enrolled in educational programs, it will be incumbent upon us to see that kindergarten programs are not watered down first grade programs and that programs for 2, 3 and 4-year-olds are not watered down versions of those kindergarten programs; while non-handicapped children have the opportunities for exploration, guided active experiences, large muscle movement and purposeful play which child development experts tell us are appropriate to their developmental levels. If we are to enroll young children during their most impressionable and vulnerable years, there is an enormous responsibility to see that they are not subject to the boredom too often seen in elementary school age groups and the kind of attitude which says, "We don't use the question form 'why' until the 4th level."

Conversely, we see some persons with early childhood education backgrounds who do not realize the difficulties under which handicapped children often operate and who are not familiar with the excellent in-depth work done in special education, for instance in breaking down language tasks for deaf children and ordering the steps of receptive comprehension, guided practice and independent use.

The Handicapped Children's Early Education projects seek to meet this need for dual competency in several ways the projects which have stronger elements in special education are encouraged to utilize consultants and in-service training personnel from early childhood education or child development, and vice versa. In addition, the Division of Training Programs of the Bureau of Education for the Handicapped has supported a Training Center, at the University of Texas to provide assistance to each project in meeting its own in-service training goals. This project is developing models for in-service training.

One additional way in which the Division of Training Programs is attacking the problem of insufficient numbers of trained personnel and personnel with new kinds of preparation is through the Special Projects program, which allows for more flexible, shorter term experimental training efforts. BEH and BEPD are also concerned with the training of paraprofessionals, as aides and volunteers are being used increasingly. By the way, the use of parent aides and of volunteers is stressed by the Handicapped Children's Early Education Program as a way not only to use their abilities but also to familiarize them with the handicapped persons and develop a real understanding of what some of these youngsters are up against and what they can sometimes achieve. Lack of first hand experience and acquaintance with the handicapped has made the development of community understanding and support for relatively costly programs more difficult.

You have probably had similar experiences to mine—when I taught pre-school deaf children I frequently heard, "Oh, so you use Braille!"

We are all familiar with the campaigns in many neighborhoods to have facilities for the handicapped erected someplace else, or at least built with a high wall or hedge around them so the children won't be visible. Many of our projects are overcoming this kind of attitude, built partly on unfamiliarity, by involving greater numbers of people from many strata of the public in the projects, as volunteers or members of the local advisory boards. If these volunteers and paraprofessionals are to be used effectively and gain satisfaction from seeing their work make a difference, we have seen that training is necessary. Too often one sees an aide operating at less than capacity because she does not realize how much input she could be making. I recall a woman who was playing ball with a child with communication problems. The only language she was using was "good boy," which was positive feedback. However, when she left to attend to something else I was able to ascertain quickly that the child did not understand roll, bounce or throw and that he was able to learn to comprehend these one at a time responses with the correct action to any of them and then begin to try to use these words in phases in response to questions, using imitation.

It is encouraging to see that there is a greater realization in many quarters of how many opportunities there are to give input and to raise levels of expectation, and how many of the things done in special classes can be done by those without extensive training so that the really difficult things can be done by paraprofessionals. The area of the deaf has pioneered in so many ways, in starting younger, in involving parents, in looking closely at language learning—perhaps now it can also make a timely contribution to the more effective training and use of paraprofessionals.

One action the Handicapped Children's Early Education Program has taken to make more readily available information on the needs of young handicapped children for special teaching assistance, equipment, facilities and parental involvement is the underwriting jointly with the Office of Child Development of a manual designed for day care programs for non-handicapped children which will be enrolling some handicapped children. This manual is to be one of a series for day care centers to be published in a year by OCD.

Since a requirement of the Early Education Program is that comprehensive services be provided, increasing cooperation and coordination among agencies serving young children has developed in many areas. Regional cooperative educational agencies have established projects and mention has been made of several jointly sponsored projects. There appears to be considerable need for those serving the handicapped to work closely with other agencies. An outstanding example of successful cooperation is afforded by the project to provide services to emotionally disturbed children in Georgia. This project came about because there were almost no such services and no funds for them. Detailed cooperative planning by the University of Georgia, the Department of Mental Health and the State Department of Education resulted in a program which was designed to be replicated without further assistance from the University and which utilizes neighborhood workers and therapists who are in daily contact with children enrolled in regular school programs. The Bureau of Education for the Handicapped funded the preschool component of this program shortly before the State legislature voted to support the school age component, and the success of the plan has already led to increased support and the establishment of additional satellite centers ahead of the original schedule.

Another project which has obtained cooperative support, this time from the State Department of Mental Health and the Junior League, was sponsored by George Peabody College in Nashville. The degree of active participation of the parents, who carry out 98 percent of the project's activities, and their enthusiastic cooperation can be credited with the acceptance of the project and the assurance that it will be continued under non-federal auspices.

One area which everyone talks about and few do much about on a large scale is prevention of handicaps. One of the new activities funded this year by the Handicapped Children's Early Education Program in addition to the demonstration projects is a project with the American Speech and Hearing Association to prevent speech and communication problems. Workshops for day care and preschool personnel will be held to increase understanding of the development of speech and language and still in furthering that development. There will be an effort to build understanding and acceptance of non-standard of dialects. A major trend today in early childhood education is the push for day care. With major legislation likely to be passed in the near future, the picture is changing drastically.

Congressman Brademas has stated that by 1980 there will be 5.3 million on working mothers with children under five, an increase of 43 percent over the 1970 figure. Today there are day care services available for only 641,000 children, and many of these services are not licensed and have no educational component. At present the Federal Interagency Day Care Regulations make only passing reference to children with special problems, although these regulations are being revised and we hope to change that. Specialized resource personnel are described by "Standards and Costs for Day Care", published by the Office of Child Development, HEW as "(psychology, music, art, consultants, etc.). So that handicapped children will receive their fair share of the funds which will probably go into day care and so that the specialized services which they require are made available, perhaps on a resource personnel basis to handicapped children who can be enrolled in regular day care programs, increased efforts at cooperative planning are now underway at the Federal level. At the local level, many of the demonstration projects have reached out to work with day care, kindergarten, preschool and nursery programs willing to enroll some handicapped children. The possibility of large scale provision of day care services could provide us with an unparalleled opportunity to make available educational and socializing programs with special services to far more handicapped children at younger ages when they can be helped most effectively than ever before in our history. Despite our problems, this is an exciting and a hopeful time to be involved in early education for the children who need it most.

CAREER EDUCATION FOR THE DEAF IN THE 70'S

Malcolm J. Norwood, M.Ed., Assistant Chief and Ernest E. Hairston, M.A., Education Program Specialist, Media Services and Captioned Films, Bureau of Education for the Handicapped, U.S. Office of Education

Over the years, one of the more outstanding features of the education of the deaf has been the built-in vocational training programs which have done much to prepare the deaf person for employment.

Rehabilitation Counselors have also long been aware of the need for training programs for deaf youths and adults. Yet in terms of career education, very few programs have been implemented and none, to our knowledge, are comprehensive enough to encompass *all* deaf individuals, not even a majority of school age deaf children or school leavers. This statement is not intended to minimize the vocational programs of schools for the deaf, the services provided by rehabilitation facilities and training centers, and institutions of higher learning for the deaf, but to bring to the forefront an overall emphasis that deaf children and adults are not being adequately served by existing vocational programs or in the area of career development.

For the purpose of clarity the term "career education" is preferred in place of "vocational education" since it covers a wider field of occupations and implies the need for academic input as well as technical instruction.

The Vocational Education Amendments of 1968 expanded the Vocational Education Act of 1963 to insure that vocational education was provided for handicapped persons who because of their handicaps were prevented from succeeding in regular vocational education programs. Deaf persons are included under these Amendments. The type of special programs and services that could come under these Amendments includes special instructional programs, remedial instruction, guidance, counseling and testing services, employability skills training, special education equipment and services, and interpreter services. This can and should be accomplished with the 10 percent of each State's allotment of funds appropriated for State Planned Programs. In Fiscal Year 1971 which ends this week this 10 percent amounted to $32,174,771.00.

Coordinated planning between schools for the deaf, departments of special education, vocational education and vocational rehabilitation at the Federal, State and local levels is encouraged. This brings about continuity and comprehensiveness of vocational education programs for the handicapped, especially deaf individuals. Emphasis should be placed on early evaluation, instruction in specialized areas, on-the-job training, placement and follow up. This type of program gives students the opportunity to explore each vocational discipline offered and the opportunity to be evaluated in terms of performance and interest before specializing in one area. Such a program can be geared to the needs of school leavers, dropouts, and those who would ordinarily be graduated with a vocational certificate as well as an academic diploma.

Prevocational training should not be overlooked. Such training would include occupational adjustment, interpersonal relationships, personal adjustment and similar activities which would render a person better equipped to handle vocational training or job responsibilities. Prevocational training in its broadest sense should be made available along with and as part of the regular academic courses and be given equal status.

Dr. Sydney P. Marland, Jr., Commissioner of Education, has formulated eight major national objectives for American Education for FY '72. They are as follows:

1. The provision of Career Education to all who can benefit;

2. The provision of quality education and equality of educational opportunity for disadvantaged children;
3. The elimination of racial and cultural isolation:
4. Innovation and renewal wherever they can strengthen our educational system;
5. Appropriately designed education for more handicapped children;
6. Right to read;
7. Special revenue sharing; and
8. Better management.

What Dr. Marland has done is to make the education of handicapped children a major priority of the Federal Government. Dr. Edwin W. Martin, Associate Commissioner for the Bureau of Education for the Handicapped, has pledged that our goal is to see that all handicapped children in this country will receive full educational opportunity to reach their maximum potential and that this is their inalienable right.

Consequently, one of the major thrusts of the Bureau of Education for the Handicapped is to . . . "develop and promote, in cooperation with the Bureau of Adult and Vocational Education, the installation and adaptation of relevant vocational education models leading to adequate career training and job opportunities for all handicapped youth". In keeping with this objective, Media Services and Captioned Films has added to its staff an education program specialist for adult and vocational programs, whose main responsibility, among others, is to plan, develop and implement programs of continuing education for deaf youth and adults.

Strategies must be made and steps taken to implement the Commissioner's goal. Under the sponsorship of the Southwest Regional Media Center for the Deaf, a Conference on Media and Instructional Technology in the Education of the Deaf was held in New Orleans in February, 1971. In summary, it was recommended that:

1. For guidance and career selection—mediated material should be developed or provided the student, in consultation with his teacher, his counselors and his parents, with the information he needs to make career decisions;
2. For post secondary training programs—mediated materials should be developed to provide the hearing impaired student, his parents, and school and rehabilitation personnel with the needed information regarding the availability of post secondary training programs;
3. For instructional systems for short term training—appropriate concentrated training programs incorporating media and instructional technology for unemployed deaf persons not currently enrolled in local school programs or post-secondary training should be developed;
4. For pre-vocational skills—the development of highly specialized media suitable for prevocational training of deaf persons.

Each of the forementioned areas received high priority on the list of conference participants. Accordingly, they will receive full consideration as Media Services and Captioned Films plans its strategies for the 70's. Implementation will require the cooperative effort of schools for the deaf, vocational rehabilitation agencies, training and rehabilitation facilities, vocational education and post secondary programs and employers at the Federal, State and local levels.

A major difficulty in job performance has not been the inability of the deaf employee to do the job, but rather his inability to cope with the social, personal and interpersonal interactions that arise in any employment situation. This is the result of not being adequately prepared in understanding how to relate to certain situations, a spin off from the handicap per se. Within MSCF steps are already being taken to provide materials to help the deaf person understand some of these sensitive areas of human interaction. A series of films which we will call the Human Behavior Series is being developed. These films will cover subjects such as working with hearing people, dating and parental authority and should provide a means for making career education a part of the academic program by providing meaningful materials geared toward the development of better attitudes.

Professors Norman Gysler and Earl Moore of the University of Missouri stated that "the development of sound, school-based, career exploration programs at the elementary, secondary and post-secondary school levels requires an understanding of the learner and knowledge of how to structure and transport the material to be learned most effectively and efficiently." Media utilization is an excellent way to help with career development but at present there are no guidelines for determining what aspects of a subject should be assigned to what media. A proposed media classification system classified individual and group activities into four categories:

1. prestructured and fixed—publication, audiovisual aids, and planned programs;

2. input controlled by individual—individualized instruction, career exploration kits, and computer assisted guidance programs;

3. simulation of situations—life career games and career simulation kits; and

4. real situation experiences—direct observation, directed exploration and actual occupational experiences. This usually takes place at the secondary level.

Career education is a complex developmental process and involves educational objectives, instructional models and consideration of the characteristics of learners, thus should be flexible enough to encompass each individual student.

Mediated instructional materials and vocational education programs alone cannot do the job of providing career education to the deaf individuals. Efforts must be made to develop career education programs that are as practical and realistic as possible within both the technical and the academic programs and begun at the elementary school level. Emphasis should be placed on developing skills and attitudes rather than on developing specific trades which will come later. Some skills and attitudes to be developed are: (1) initiativeness, (2) dependability, (3) responsibility, (4) reliability and (5) punctuality. Students must display readiness before undertaking a specific career. Student attitudes toward job responsibilities and career selections are frequently influenced by the attitudes of teachers, parents, and counselors. The old saw "experience is the best teacher", still holds true, thus actual work experience and on the job counseling are invaluable parts of career education. So is training in communication skills, especially for those who aspire to careers in skilled or professional jobs.

What we are suggesting is meaningful career education as opposed to mere development of vocational skills. Our programs for the deaf must and should be geared to economics reality and perceived career opportunities. The Vocational Education Amendments of 1968, the priorities established by Commissioner Marland, the determination of Dr. Martin, the conference at New Orleans and the steps already taken by Media Services and Captioned Films all lead to a coordinated planning effort to provide deaf persons with special services which will lead to productive lives and personal fulfillment. Just as vocational training programs have proved to be an outstanding feature of the education of the deaf, so can career education be an outstanding feature of the future. The opportunities, the interest and the funds are available. Together we can accomplish this goal and if past performance is an indicator, the future is assured.

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(*4*) National Association of State Directors of Special Education, a prepared speech by Dr. Edwin W. Martin, Associate Commissioner, Bureau of Education of the Handicapped, Seattle, Washington, July 9, 1970.

(*5*) *Vocational Education for the Handicapped*, an unpublished paper prepared by the Program and Program Evaluation Staff, Bureau of Education of the Handicapped, 1970.

(*6*) *Report of Conference on Media and Instructional Technology on Vocational Education of the Deaf*, prepared by the Southwest Regional Media Center for the Deaf, February, 1970.

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TUESDAY, JUNE 29

10:30 a.m.–4:00 p.m.: Contributed Papers—Parnell Hall Auditorium—*Chairman:* Dr. William N. Craig, Superintendent, Western Pennsylvania School for the Deaf.

10:30 a.m.: "*Are They Not Educators of the Deaf?*"—Miss Shirley R. Curtis, Coordinator, Residential, Health and Social Work Services, Rochester School for the Deaf; "*The Role of the Paraprofessional in the Classroom for the Deaf,*" Mr. Melvin R. Ladson, Supervisor of Deaf Children, Massachusetts Department of Education.

1:30 p.m.: "*Social Patterns of Deaf People in Integrated Programs,*" Dr. Roger Riffer and Panel, National Technical Institute for the Deaf; "*Social Patterns of Deaf People in Integrated Setting,*" Harold Merwin Mowl, Jr., Western Pennsylvania School for the Deaf; "*A Community Service Volunteer Program for Students at the National Technical Institute for the Deaf,*" William F. Yust, National Technical Institute for the Deaf, Rochester, N.Y.

ARE THEY NOT EDUCATORS OF THE DEAF?

Shirley R. Curtis, B.A., M.S.W., Rochester School for the Deaf

How often do we hear, "He is just a houseparent," or, "I am only a child care worker." These utterances can be heard in private conversations and at conferences. In any case, the houseparent, child care worker, dormitory counselor, cottage parent, or whatever the latest euphemistic title, is perceived by others and by himself as inferior to *all* the other professions working with the same group of children. The appalling situation is apparent, I dare say, in all residential settings, be they schools, institutions, or treatment centers. A recent editorial in *Motivation*, a newsletter published by the Rochester Chapter of the National Association of Social Workers, stated that "Agencies working in the child welfare field have persistently and consistently maintained that it is the setting itself (milieu) that does the most to effect change in children and that child care personnel exert the most influence in determining the quality of the setting." The editorial goes on to say, "In spite of the increasing self-realization of the importance of their function, child care personnel in many settings lack voice in the determination of their own future. They have had little control over salaries, working hours, and have felt low status in the eyes of the general community."

Those of us involved with residential schools for the deaf have to admit that child care workers find themselves in the same situation serving our deaf students. How many child care workers or their supervisors are members of CAID or are listed as educators of the deaf? If a person works in a dormitory with deaf students, he is conferred a second-class status, regardless of his college education and/or experience or his knowledge and understanding of the deaf. I speak as a social worker when I say that the dichotomy between child care workers and classroom teachers is as apparent and as absurd a situation in the education of the deaf as is that of the opposing educational philosophies of oralism vs. manualism.

The intent of this paper is not to minimize the role of the classroom teacher as an educator but, rather, to enhance his role of leadership by acknowledging that other educators have responsibility for the education, care, and attention of each residential student for the other 19 hours of every day. It rests on the shoulders of these out-of-the-classroom educators to socialize our deaf students into the greater community by acquainting them with the mores, norms, and laws of our society and assisting these deaf students to incorporate these into their own life styles. These out-of-the-classroom educators not only teach the skills of living, but they also support the skills and knowledge which you, as classroom teachers, have shared with the students. Often it is the after-school educator who reinforces the answer to "Why do we have to learn this math?"

Let us remember that no level of intelligence or academic achievement will guarantee a meaningful, self-fulfilling, productive life without an adequate social and emotional adjustment. It is the "only a child care worker" who teaches the deaf student the skills of living so he can use the skills of academic learning to his and his community's benefit.

The role of the "just a houseparent" is often given verbal status by a patronizing school administration or by the teachers' association that offers the outside-of-the-classroom educator an associate (almost equal) membership. But the non-verbal communication, in which all of us should be experts, confers a definite second-class status. How often do we hear what the houseparents have to contribute to a staffing or conference—if we remember to invite them?

Don't we usually remember those things which we consider important and beneficial? How do the salary schedules of the outside-of-the-classroom teacher compare with the salary schedules of the other professionals working with our deaf students? Are there local, state, or national associations of child care workers of the deaf? Would the funding bodies allow time off for "just houseparents" to attend a conference or in-service training? Do child care workers receive tuition support to improve their academic credentials? Are houseparents eligible for various state and federal grants to broaden their expertise? The child care worker is expected to totally finance his professional education on a lower salary than the classroom teacher who not only enjoys a higher salary but often receives tuition support.

Along with inferior status, inferior salary, inferior working hours and conditions, they also suffer from the lack of a career ladder. Yes, we say they can "move up" into teaching. I assume we mean the 5-hour-a-day structured classroom teaching. Oops, another slip of the tongue. We just stated that the next step of the child care worker's career ladder indicates upward mobility to the classroom teacher level. The child care worker with a Bachelor's degree is unwise to take his Master's in anything other than deaf education. It may surprise many of you, but most of the child care workers at our school prefer the jobs they do during the other 19 hours a day over the 5-hour day classroom job. But, how many child care workers of the deaf have become a superintendent of a school for the deaf without first becoming a teacher of the deaf? The result is that a good after-school educator can look forward to maybe becoming supervisor of the boys' dormitory or supervisor of the whole residential program. That is, unless an agressive, eager classroom teacher is willing to take it as his first step up the administrative ladder. In that case, a person with little or no knowledge of the child care profession will begin teaching the after-school educators how to do their jobs as if they were his students.

I recognize that many child care workers have not completed 5 or 6 years of college, but many have. Most are seasoned with years of experience—a credential which, I feel, far outweighs 6 years of college alone. Those child care workers who do have equal credentials still do not enjoy equal status, salary, or benefits to their classroom peers. We must begin to acknowledge the inferior status conferred upon the child care worker and change the situation. The educators of the deaf who are involved with deaf students before and after classroom hours must enjoy equal status, remuneration, and benefits. As long as these differences exist, it is the deaf student who will suffer.

What information does this deplorable situation convey? Obviously, academic and vocational teaching are more important than teaching students how to live and function at work and play in our society. Classroom teaching must be a more important and responsible job than teaching students how to apply this knowledge in everyday life, achieving good social and emotional adjustments to life and to themselves.

This situation must change. Arrogance and professional jealousies must be replaced by a team of concerned, interested, skilled professionals who want to get the job done well, regardless of who does what or who receives the credit for the success. This is possible if, in word and fact, all those working with the deaf student are professional peers. This can be achieved by certifying *all* professionals who work with the deaf and by providing equal opportunity for all disciplines to earn their respective certifications.

The time for this change is now. Colleges and universities are still growing and expanding their programs and facilities. What's more, there is a new breed of after-school educators who are coming to us with greater youth, interest, enthusiasm, and academic attainment than perhaps our houseparents of 10 years ago. Let's do everything we can to keep them where their hearts are—that is, in the dorm or after-school program. To do this, all educators of the deaf must demand educational programs to meet their specific educational needs. All educators can and will make these demands when they are all truly equal educators of the deaf, be it at 9:00 a.m. or 9:00 p.m.

I am aware of the certification procedures and classifications as outlined by the Conference of Executives of American Schools for the Deaf. I am also aware of the Institute approved by the CEASD at the North Carolina School for the Deaf this summer. How many other programs are there in this country designed to meet this particular need? Are the present programs designed for the seasoned child care workers of 20 years' experience or the child care worker who comes with a master's degree in social work, psychology, or deaf education? How many school administrators know of and strongly support these programs with financial aid to the individual? Is there a federal or state grant for which I could apply and use for one of these programs? Is this CEASD certification of child care workers a proposal or, indeed, a fact? How many administrators know that answer? How many child care workers even know that CEASD is working on certification? Did the CEASD committee consult child care workers before they established the criterion? How does the child care worker in Rochester, New York, or Little Rock, Arkansas, become certified, if, in fact, he meets the criterion as outlined by the CEASD?

The benefits of workshops and conferences for the classroom educators are recognized and sought after. It is time for all school administrators to help the after-school educators of the deaf to become organized with others in their state and country. School administrators could help by allowing time in the school calendar for conferences, in-service training, workshops, and institutes on a local, state, or national level for after-school educators. The present isolation of all child care workers tends to restrict creative and innovative ideas.

In-service training programs and certification programs should be, according to Philip Kaminstein, who is Training Coordinator at Berkshire Farm for Boys, Canaan, New York, "in the hands of individuals who themselves have had direct experiences in the performance of child care tasks, (and) possess some measure of understanding and objectivity in relation to the attitudes they bring to such tasks. In other words, they should have achieved professional competence and be able to fulfill a professional role."[1] Those who will teach and supervise these programs should be professional child care workers, not trained classroom teachers of the deaf, not psychologists, not social workers, not administrators, nor guidance counselors. They should be professionals in their own field.

Kaminstein points out that "While the child care function may be closely interwoven in its rehabilitative focus and actual tasks with thoses of other disciplines—education, psychology, pediatrics, psychiatry, and psychiatric social work—it constitutes a distinct body of practice which is not integral to the functions of these other child-serving professions."[2]

In light of the child care worker's very important responsibility, it is essential that he be granted the status of colleague with the other members of the team. The child care worker should not be ignored at any level of the decision-making process. If his contributions to the decision-making process are ignored, the margin for error will increase. (Research reported by Steinback and Pincus in the June, 1970, issue of *Child Welfare* showed that behavior observations by cottage staff were more accurate than those of social workers living in the same cottage.) These out-of-the-classroom educators are the people with whom the students identify their total care and immediate experiences. Kaminstein remarked that, "He (the child care worker) is closer to the administration than the (other) professional workers in carrying out the day-to-day operations and protective functions of the facility."[3]

It should be obvious that it is to the advantage of all—the administrator, the classroom educator, the student, and the "just a houseparent" to raise the after-school educator to a peer level with the other professionals involved with deaf students.

This group, CAID, can and must effect change in this area. There is no reason for the poorer salaries, long hours away from their own families, split shifts, live-in requirements, and lack of a career ladder; i.e., no future in the field of child care or deaf education. Why should the child care worker who is equally qualified educationally to his brother who is a classroom teacher accept all this as well as an inferior professional status to his brother who is a classroom teacher?

If you allow up-grading of your residential staff by making the working conditions bearable and accepting change, you will be doing your deaf students the service you have committed your professional lives to do.

Don't be afraid of change; new ideas will emerge. Isn't that what our field needs right now? Why are our students so dependent and naive when they leave our schools? Our after-school educators may well know the reasons and how to resolve the problem.

As a group and as individual educators, open the doors and let your equals in. Accept the "just a houseparent" and "only a child care worker" as equals; don't perpetuate the second-class status. It hurts you and your students. By working together, you can help each other so that our larger goal is met; that is, that well educated and socially and emotionally well adjusted deaf youth emerge from all our schools. As classroom educators, you can't do it alone; nor are you expected to. The education of the deaf cannot show remarkable improvement until the "whole" deaf student is considered and all the parts are nurtured, shaped, and educated by qualified, mutually respected personnel.

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[1] Kaminstein, Philip. "Training the Residential Child Care Worker: A Design for In-Service Training," *The Institute for Child Mental Health* (New York: 1970), p. 6.

[2] *Ibid.*, p. 6.

[3] *Ibid.*, p. 8.

After all, are we not all educators of the deaf?

APPENDIX A.—CERTIFICATION REQUIREMENTS FOR DORMITORY COUNSELORS (CEASD)

Class C

To be eligible for this certificate, the following requirements must be met:

1. All candidates must have a diploma from high school or *a school for the deaf.* Passing the General Educational Development Test and securing a certificate of high school equivalence is acceptable.

2. All candidates must have 3 semester hours' credit in courses about the child. These courses should be in areas of study about the psychological, psysiological, social, and intellectual development of children.

3. Three semester hours in activities and recreation for the deaf and 3 semester hours in communication with the deaf are required. These requirements may be met by completing regular college courses in these subjects or participating in a duly organized and approved workshop.[1] Forty-five clock hours of workshops shall be assumed to be equal to 3 semester hours of college work.

4. Following the preparation, 3 years of successful experience as a dormitory counselor with the deaf are required for a permanent certificate. A temporary certificate may be granted following preparation and before necessary experience is completed.

5. All candidates must be of good moral character.

Class B

To be eligible for this certificate, the following requirements must be met:

1. All candidates must have completed 2 years (60 semester hours) of college work.

2. All candidates must have satisfactorily completed 6 semester hours in courses about the child. These courses should be in areas of study of the psychological, physiological, social, and intellectual development of children.

3. Three semester hours in activities and recreation for the deaf and 3 semester hours in communication with the deaf are required. These requirements may be met by completing regular courses in these subjects or by participating in a duly organized and approved workshop.[1] Forty-five clock hours of workshops shall be assumed to be equal to 3 semester hours of college work.

4. Following the preparation, 2 years of successful experience as a dormitory counselor with the deaf is required for a permanent certificate. A temporary certificate may be granted following preparation and before necessary experience is completed.

5. All candidates must be of good moral character.

Class A

To be eligible for this certificate, the following requirements must be met:

1. All candidates must hold at least a Bachelor's degree.

2. All candidates must have satisfactorily completed 9 semester hours in courses about the child. These courses should be in areas of psychological, physiological, social, and intellectual development of children.

3. Three semester hours in activities and recreation for the deaf and 3 semester hours in communication with the deaf are required. These requirements may be met by completing regular college courses in these subjects or by participating in a duly organized and approved workshop.[1] Forty-five clock

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[1] *Duly organized and approved workshop* is one which has been organized by a college or university with college or university personnel as instructors, or a workshop organized on a regional basis through the cooperation of several schools for the deaf. Workshops or in-service training programs organized by a school for the deaf and conducted by the school's own staff members are unacceptable for certification purposes.

hours of workshops shall be assumed to be equal to 3 semester hours of college work.

4. Following the preparation, 1 year of successful experience as a dormitory counselor with the deaf is required for a permanent certificate.

5. All candidates must be of good moral character.

THE ROLE OF THE PARAPROFESSIONAL IN THE CLASSROOM FOR THE DEAF

Melvin R. Ladson, Jr., M.S., State Supervisor of Deaf Children,
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Of the recent advances in the field of education few have been more widespread than the introduction of the paraprofessional into the educational program. The education of the deaf has been no exception in this development. Of particular significance to these educational programs for the deaf is the role of paraprofessional in the classroom. It shall be the purpose of this paper to discuss certain implications and considerations emanating from this development. The limitations of time allow for a treatment of only the more salient of these factors.

A statement regarding terminology is appropriate at this point. The type of personnel which serves as the focal point of this paper is variously referred to as a paraprofessional, a teacher-aide, an instructional assistant or auxiliary personnel, to name a few. Though there are technical differences among these designations, for the purpose of this presentation these terms shall be used interchangeably.

Various factors have coalesced to bring the issue of the utilization of paraprofessional personnel in classrooms for the deaf to the fore. The increased awareness of the need to provide more individual and small group instruction than even our usual small classes allow, the increasing availability of instructional machinery, with its emphasis on individualized instruction, the unprecedented availability of Federal funds with which to train and/or employ paraprofessionals and the increased number of multiple handicapped deaf pupils who demand more personal and special attention are but a few of such causative agents. Bowman and Klopf state that "several convergent forces—social, educational and economic have contributed to such employment:

1. The ever changing and expanding needs for school services;
2. Acute shortage of professionals to meet these needs;
3. New dimensions in education, requiring a more complex and demanding role for the teacher;
4. Heightened awareness of the special learning needs of disadvantagd children and youth;
5. The plight of undereducated persons unable to compete in an increasingly automated economy; and
6. The availability of Federal funds for the employment of . . . non-professionals in education, through such sources as O.E.O., M.D.T.A., and Title I of the E.S.E.A." (*1*). (One can add the E.P.D.A., PL 90-3, Parts B-2 and D to this list.)

The ability to cope with all these developments is rapidly exceeding the proficiencies of the single teacher. As Klopf, Bowman and

Joy have pointed out "The involvement of persons with a wide range of skills, training, background, experiences and potential may provide a better learning environment than the assignment of all educational tasks in a classroom to one person who, alone, must attempt to meet the individualized needs of many students" (*2*). Indeed, the prospect of having to face such a herculean task daily has been the bane of many a teacher's professional life. In dealing with this fact Baynham and Trump have pointed out that "Lack of time for professional work damages professional pride. About a third of a teacher's day goes to clerical and sub-professional tasks, another third to work which could just as well be done by various kinds of automated devices. A situation which provides only a third of the day for performance of work he is trained to do—and finds satisfaction in doing—contributes little to the morale of a talented, conscientious teacher." (*3*).

It is clear that this bane to the teacher can be replaced by a boon. However, the teacher is but one of several people who would benefit by the services of paraprofessionals. Discussing possible benefits from the utilization of such auxiliary personnel Dady cites the following:

To Pupils

The non-professional-professional team should provide more freedom of movement in the classroom, thereby permitting children to work independently or in small groups. There should be opportunities for teacher experimentation using innovation instructional techniques.

To Teachers

Teachers should benefit from improved working conditions that will permit them to devote most of their workhours to the specialized aspects of teaching, such as experimentation with innovative techniques, guidance and counseling of children, and providing for individual differences.

To School Administrators

The employment of auxiliaries in the school should make it possible for administrators to meet the ever-increasing need for services despite the shortage of teachers and other professional persons.

To Auxiliaries

A person accepted for employment has opportunities to develop competencies for a position which will not be automated out of existence. Through continued employment and upgrading, the auxiliary may set higher vocational sights for himself and continue his training in higher education (*4*).

Further justification for including the paraprofessional as part of the education team should be superfluous at this point. We should now move to a consideration of how this type of personnel can be used in a typical classroom for the deaf.

The age of the pupils in the class, their academic level and special needs, the preferences of the teacher and the abilities, special competencies and resourcefulness of the teacher aide are some of the more crucial factors that determine the nature of the duties of a paraprofessional. One study ranks those duties which teacher aides performed at least 75 percent of the time they spend in the classroom:

1. Providing clerical assistance including duplicating materials.
2. Playground supervision.
3. Housekeeping chores and bulletin boards.
4. Lunchroom supervision.
5. Working with individual pupils.
6. Filing and cataloging materials.
7. Collecting money.
8. Correcting objective tests.
9. Correcting workbooks.
10. Preparing visual materials for instruction (*5*).

Duties more peculiar to a classroom for the deaf would include:

1. Checking, maintenance and storage of hearing aids (including ear molds) and group amplification equipment.
2. Working with individual pupils or small groups on teacher-assigned tasks.
3. Operating instructional and audio-visual machinery.
4. Supervising and monitoring pupils as they work with teaching machines.
5. Constructing flash cards, charts and other teaching aides.
6. Running off duplicating material.
7. Recording and evaluating pupil response to both formal learning situations and unstructured situations and reporting same to the teacher.

It should be pointed out that many states have statutes governing the manner in which the instructional assistant may function. It is not uncommon to find state regulations which restrict paraprofessionals to non-instructional duties. Other states, such as Massachusetts, allow teacher aides to perform virtually any duty as long as it is assigned and supervised by the teacher. In all cases, programs employing teacher aides should become familiar with all pertinent laws. The State Departments of Education are good sources to which such inquiries may be directed.

Regardless of the specific manner in which an aide may function in a given classroom one factor is of paramount importance. Their duties should be stated clearly and in advance of the assumption of his/her position. Further, they should be cooperatively arrived at and agreed upon in discussions between the teacher and the aides.

This leads to another important consideration in discussing the duties of a paraprofessional. The teacher aide should share in the planning of lessons and classroom activities. There should be joint planning sessions weekly in which the activities and materials for the following week are discussed. At the end of each day, after the pupils are dismissed, the teacher and the aide should spend a few minutes reviewing the day's events and evaluating each pupil's responses. The aide should contribute freely to such discussions and his/her observations and suggestions should be given full consideration by the teacher. However, here as in all instances, it must be clearly understood that the teacher alone has the responsibility for making the final decision as to the content, objectives, and procedures of the class program. It is the obligation of the paraprofessional to accept these decisions and to operate effectively and conscientiously within this framework.

If the above precautions are taken then situations in which paraprofessionals, once they are hired, are mis-used or, as is more frequently the case, under-used, should decline markedly.

Now that we have discussed some ways in which the auxiliary may effectively contribute to the learning process the question arises as to how can teacher aides be prepared to contribute maximally to this process. Further, and of equal importance, how can the teacher be prepared to work most successfully with an aide. Few of us who have had the services of an aide do not know the anxiety and frustration experiences because little, if any, attention was paid to these crucial considerations.

Dady warns that "the employment of auxiliaries without comprehensive orientation to duties and responsibilities of the assigned positions is an invitation to serious personal problems involving the working relationships between the auxiliaries and the teachers. In the absence of proper orientation, the auxiliary may attempt to take over the classroom, to assume duties normally assigned to the pupils or to rebel against simple tasks" (*6*).

Klopf, Bowman and Joy state that "the training of the professional is . . . critical because of his responsibility for role development: both his own role and that of the auxiliary. If teachers are not centrally involved in this process, the results tend to be barren and artificial" (*7*).

There are certain avenues which can be pursued in making provisions for the professional preparation of the paraprofessional. These would include:

1. Pre-service training.
2. Orientation sessions.
3. In-service training.
4. Role-playing experiences.
5. Pre-appointment on-the-job experiences.
6. Junior college preparation, leading to an Associate of Arts degree. (A model program for the Associates Degree for Teacher Associates, consisting of 68 hours, is presented by Dr. Milan B. Dady in his study at Morehead State University "Auxiliary Personnel Programs in Rural America") (*8*).

For the employed teacher pre-service training and in-service training may be utilized to prepare for working with an aide.

However, I would like to suggest a more bold, and I believe a more effective, way to prepare the prospective teacher and the aide for their partnership roles. In each college program designed to prepare educators of the deaf there should be required courses in the techniques of working with a paraprofessional in a classroom for the deaf. The specific ingredients of such courses must be explored in another treatise. The need for such a modification in the college curriculum is patent. Further, I would suggest that the student internship, practice teaching, be restructured to include the presence of the teacher aide. The prospective teacher should be evaluated on his effectiveness with the aide no less carefully than on his effectiveness in motivating pupil learning.

Since I've gotten in a rather expansive mood I might as well go all the way and further suggest that the college program be modified so that part of the program would include the joint preparation of both the teacher and the aide. If we pay more than lip-service to Dewey's maxim that "we learn by doing" then the rationale for this proposal is obvious. Klopf, Bowman and Joy have stated that "Training-for-partnership is a process—not a preconceived curriculum—which evolves out of the observed and felt needs of the participants with emphasis on self-direction and self-evaluation as they, together, search for better ways of enabling children and youth to learn.

"The pivotal factor in the process is the opportunity for developing competency through simulated or actual experience, with immediate feedback. The process is essentially inductive, not deductive.

"The process is continuous, proceeding through cycles of experimentation involving:

(a) Setting goals.
(b) Planning cooperatively to meet goals.
(c) Enacting the plan.
(d) Reviewing the experience in an atmosphere of free and open communication.
(e) Analyzing one's own and each other's behavior in terms of educational outcome.
(f) Changing the approach, the behavior or the situations as indicated by the feedback.
(g) Trying again and reviewing the experiences again—until the potential contribution of each team member is recognized and sound working relationships are not only established but maintained."(*9*)

Once the aide has been professionally prepared he then, naturally, seeks employment. Prerequisite to the assignment of the aide to a classroom there should be separate interviews with the appropriate representative of the administrative hierarchy and with the teacher to whose class he will be assigned. The interview with the administrator should cover such topics as:

1. General description of duties.
2. Salary.
3. Hours.
4. Fringe benefits.
5. Promotion opportunities.
6. His role relative to that of the teacher's.
7. School rules, policies, and procedures.

The interview with the teacher should include:

1. Introduction to the class.
2. Brief description of each child and any pertinent characteristics of each.
3. Statement and general explanation of duties (specific details can be presented as the aide undertakes new tasks).
4. General introduction into the educational implications of deafness (amount of detail dependent upon aide's preparation and experience).

5. Tour of the classroom.
6. Presentation of machinery and equipment.
7. Explanation of the class schedule.
8. Explanation of planning sessions.
9. Delineation of authority.
10. Discussion of discipline.
11. Inquiry into the aide's special interests, skills, abilities, etc.

After the aide has been prepared, interviewed and assigned to a class, the role of the aide has not yet been completed. In discussing the administrator-aide interview I cited "promotion opportunities" or, as it is usually referred to, career ladders. This is a very fundamental part of the paraprofessional configuration. "If auxiliary personnel are to become a stable and accepted part of the school system rather than a temporary addition, the *JOBS*, not the people, should be institutionalized. This means the establishment of an occupational track, with budgetary provision for each step in the career ladder, and with gradually increasing responsibility and decreasing supervision" (*10*).

A possible career ladder sequence would be:

1. Trainee.
2. Aide.
3. Assistant.
4. Associate.
5. Apprentice or student teacher.
6. Teacher or other professional.
7. Training coordinator (*11*).

Up to this point I have discussed, sometimes omnisciently, the role of the paraprofessional. It would be remiss of me not to report the feelings and reactions of a representative group of paraprofessionals themselves. The Richmond Public School System published a list of recommendations for improvement in their status made by aides themselves. These were:

1. Increase in salary.
2. More in-service education with pay.
3. Promotions according to seniority and efficiency.
4. Graduation from high school, minimum requirement.
5. Scholarships to continue education.
6. More instructional duties, if qualified.
7. Salary increments according to length of service.
8. Sick benefits.
9. Retirement benefits.
10. Tenure.
11. Orientation period before being placed in a classroom situation.
12. Pre-service training a requirement.
13. Qualified aides to work as substitutes when teacher is absent.
14. Better communication with administrative offices.
15. Orientation for teachers who will have aides for the first time.
16. Written contract.
17. More male aides (*12*).

In the foregoing I have presented some considerations relative to the justification for introducing the paraprofessional into the classroom for the deaf. I have pointed out certain general paraprofessional duties and duties peculiar to classrooms for the deaf. Suggestions for the preparation of the paraprofessional and teacher who work with a paraprofessional were made. The selection process and the provisions for professional advancement were also treated.

It is hoped that this presentation will lend itself to the more effective functioning of those teacher-paraprofessional teams already in existence and the initiation of efforts to establish such teams where they are not now present.

LIST OF REFERENCES

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(*2*) Klopf, Gordon J., Bowman, Garda W., & Joy, Adena. *A Learning Team: Teacher and Auxiliary*, Bank Street College of Education, New York, April 1969, pp. 24–5.

(*3*) Baynham, Dorsey & Trump, J. Lloyd, *Guide to Better Schools*, Rand McNally Co., Chicago, Illinois, 1961, p. 8.

(*4*) Dady, Milan B., *Auxiliary School Personnel in Rural America*, Morehead State University, Morehead, Kentucky, 1968.

(*5*) *Teacher Aides in the Classroom*, The New England Educational Assessment Project, 1967.

(*6*) Dady, Milan B., *op. cit.*, pp. 12–13.

(*7*) Klopf, Bowman & Joy, *op. cit.*, p. 13.

(*8*) Dady, Milan B., *op. cit.*, pp. 53–55.

(*9*) Klopf, Bowman & Joy, *op. cit.*, pp. 3–4.

(*10*) *Ibid.*, p. 13.

(*11*) *Ibid.*, p. 14.

(*12*) Aides: *A Guide to Help Improve the Work of Aides in the Schools*, Richmond Public Schools, Richmond, Virginia, 1969–70.

SOCIAL PATTERNS OF DEAF PEOPLE IN INTEGRATED PROGRAMS

Roger L. Riffer, A.B., S.T.B., Ed. D., The National Technical Institute for the Deaf

The National Technical Institute for the Deaf provides an integrated program for its deaf post-secondary students. In describing the social patterns of these students, I will focus upon the following three issues:

(1) Is "housing policy" important in shaping the social patterns between deaf and hearing students? That is, are the social patterns of deaf and hearing people always the same, or do the patterns vary depending upon how one assigns housing to deaf and hearing students?

(2) Do the attitudes that deaf students have influence their social patterns? Previous research findings suggest that people tend to like persons whom they perceive as similar to themselves. As students spend time communicating with each other, there should either develop a growing consensus or a widening chasm. Thus, indirectly, by studying the attitudes and attitude changes of deaf people in integrated programs, one can learn about the social patterns that tend to emerge.

(3) Are the social patterns of deaf people in integrated programs always the same, or do they differ from deaf person to deaf person?

My research has led me to believe that "communication congruency"—the complementarity of communication skills between two individuals—strongly influences social patterns.

IS HOUSING POLICY IMPORTANT?

A number of housing strategies have been carried out at NTID. In September, 1969, entering students were assigned rooms in such a way that some dormitories had 4 or 6 deaf students (90% hearing) while others had 14 to 18 deaf students (70% hearing). Dormitories with small numbers of deaf students had the advantage of greater opportunity for deaf students to meet hearing students. Dormitories with concentrations of deaf students had the advantage that the resident advisor could be a specially trained student, skilled in the language of signs. After one academic quarter, I asked these students whom among their peers they liked very much, who had helped them, and whom did they respect very much. The results were that 40 percent of the NTID males in houses with few deaf peers reported positive interaction with male hearing students, compared to 28 percent of the NTID males in houses with high concentrations of deaf students. No comparable difference was found for the NTID females. Since all females, hearing and deaf, were housed in a single high-rise unit (containing "houses"), the lack of a relationship between housing policy and social patterns for NTID females may be due to the fact that each girl was just a few steps (and perhaps an elevator ride) from all the others. For the males, houses were in fact geographically separate. Hence, one can conclude that *the placement of deaf students within dormitories which also house hearing students affects the social patterns of the deaf students.*

Since the deaf students who entered in September, 1969, encountered some problems in adjusting simultaneously to the social and academic activities, a Summer Program was instituted. Eight weeks in length, the NTID students arrived on campus in July (rather than in September) to adjust to college living prior to having to deal with a full-time academic course load.

As part of the Summer Program, a new housing policy was instituted: the students were placed in houses of their own. They elected house officers and gradually acquired the social behaviors appropriate for college living. Along with the deaf students, a number of hearing students also lived in these houses. The hearing students were a carefully selected group of R.I.T. undergraduates who were quite interested in learning to communicate with deaf students. Altogether, there was a ratio of five deaf students to each hearing student.

At the end of the eight-week Summer Program, the questionnaire was administered which asked for the names of the hearing peers whom the deaf students (1) liked very much, (2) were helped by, and (3) respected very much. Among the males, 54 percent reported positive interaction with a hearing male. This finding suggests that positive interaction occurs in situations where the hearing students seek to communicate with their deaf peers. Apparently, this occurred during the previous academic year more often in the houses with a few deaf students than in the houses with a concentration of deaf students. However, when a relatively small number of hearing students who were very interested in the deaf were placed among deaf students, there was still greater positive interaction than in the ostensibly more integrated housing of the previous year. Once again, there is evidence to support the conclusion that housing policy has an effect upon the social patterns of deaf students in integrated programs.

Since the purpose of the Summer Program at NTID was to facilitate the adjustment of students to college life, I checked to see what the long-term impact of it might be. That is, I readministered the same questionnaire two academic quarters after the end of the Summer Program. I wanted to know whether students who had participated in the Summer Program would adapt to living with regular hearing college students who had not been specially selected or trained or whether they would tend to withdraw into a clique of deaf students. Of the males who responded both at the end of the Summer Program and again two academic quarters later, the percentage who reported positive interaction had increased from 54 percent at the end of the Summer Program to 65 percent at the end of the second quarter.

Further, I checked to see whether the deaf students continued to name the hearing student interpreter trainees or whether they had made new hearing friends. The data were such that 86 percent of the hearing students who were mentioned had not been mentioned previously. Clearly, the students who participated in the Summer Program succeeded in developing during the regular academic year far more social ties with hearing students than had the previous year's students in the houses with either low or high concentrations of deaf students.

Apparently, the Summer Program did successfully fulfill the purpose of preparing NTID students for college living in an integrated setting. Hence, to summarize this section, the following conclusion can be drawn: (1) communication congruency, (2) geographic proximity, and (3) preparatory programs each contribute to the shaping of the social patterns of deaf people in integrated settings.

WHAT ABOUT THE SOCIAL ATTITUDES OF DEAF STUDENTS?

There are few generalizations that can be drawn about the attitudes and attitude changes of deaf students at NTID. A certain disenchantment sets in which causes the deaf students to express opinions increasingly similar to those reported by a hearing control group (62 resident advisors, their assistants, or student interpreter trainees). The food, the police, the counselors, the teachers—all lose some of their gleam as students spend time at NTID. On the other hand, personal habits and self images seem to remain relatively unchanged over time. Deaf students agree more than do hearing students that, when talking to people, they touch them. Similarly, they agree less that they greet others by name than do the hearing students. Deaf students are about the same as hearing (and do not change) in their judgment of how handsome they are. On the issue of housing, deaf students develop over time a position similar to that expressed by hearing students. That is, as deaf students spend time at NTID, they increasingly favor housing that includes both deaf and hearing students. To the extent, thus, that attitudes and attitude changes indicate future social patterns of deaf people, one can conclude that while some habits will continue to distinguish deaf students, they do seem to be learning to question authority—an important task of the college years—and at the same time to be increasing their commitment to a life that is with rather than apart from hearing people.

ARE THERE DIFFERENT TYPES OF DEAF STUDENTS WHO HAVE DIFFERENT TYPES OF SOCIAL PATTERNS?

My research suggests that communication skill has a strong impact upon the social patterns of deaf students at NTID. I have developed a typology based upon skill at lipreading and skill at receiving manual signs. Students who understand both lipreading and signs I term "eithers." "Orals" can lipread but do not understand signs. "Manuals" are just the opposite, and "neithers" lack both the ability to lipread and the ability to read signs.

My data suggest that oral students tend to associate with each other and with hearing students. The eithers and manuals tend to interact with each other, but very few of them report interaction with hearing students. Neithers are few in number at NTID and constitute a very heterogeneous group. Some are recently deafened, others are multiply handicapped.

In terms of attitudes and attitude changes, the impact of NTID seems to be about the same for each type. That is, not only does the *average* NTID student develop over time more commitment to "integrated" housing, this is true for orals, manuals, eithers, and neithers. Initial differences tend to exist and to continue with the passages of time. For example, manual students least favored integrated housing (of the 4 types) when first enrolled at NTID and while they grew more favorable over time, they continued to be least in favor when retested two academic quarters later.

Clearly, the attitudes and social patterns of deaf students in integrated programs are complex. However, they can be shaped to some extent by policies and programs such as the ones undertaken at NTID. But it should be emphasized that the attitudes and the habits of social interaction which students have developed prior to their coming into a program like NTID's are important as well. These habits and predispositions do not vanish once a student moves into a new social matrix, they are only modified.

CONCLUSION

One can, I think, be quite optimistic about the capacity of schools to shape the social patterns of deaf people. Thus, the basic issue is (and probably will long continue to be) what patterns should be fostered? The answer to that question, fortunately, rests well beyond the scope of the researcher. I can only say that to some extent a technology appears to exist. Now educators of the deaf must decide how to use it.

SOCIAL PATTERNS OF DEAF PEOPLE IN INTEGRATED SETTINGS

Harold Merwin Mowl, Jr., B.S., M. Ed., Western Pennsylvania School for the Deaf

"Hello!"

"Hello! How are you?"

"Fine!"

That was the extent of conversation with a hearing person when I first started mixing at Bethany College back in 1965. Surely that made me proud, since the hearing peer and I understood each other. Him understanding my speech—to me back in 1965, it was a miracle! I went around the campus, saying or yelling "Hi" like a BMOC. That was how much conversation I carried on with my hearing peers that time.

Soon I came to realize that it was not such a "big deal" saying "Hi." Either I had to talk with people or quit college. I chose the latter because it was the easy way out, but a personal friend of mine thought I was nuts and told me to stay. "Oh, no!" I cried but decided to try.

"Hello!"

"Hello! How are you?"

"O.K. You?"

"Good!"

"What is your name?"

"Tom Kelly. And yours?"

"Harold Mowl."

"Come on to the BeeHive."

The BeeHive was Bethany College's snack bar. I was so elated because I was progressing. Tom Kelly was my first true hearing friend at college, and we are still the best of friends, even though we are 1,000 miles apart. Only last April he came to visit me at the school where I work.

Anyway, some of you may think I am adding too much icing on my speech to show that deaf people could do well in integrated settings. No, the piece of communication I had with Tom Kelly was the real breakthrough of the so-called "deaf barrier" for me. Soon, I was introduced to many of his friends—he was popular since he was on the varsity basketball team.

The next three years at Bethany College were great. I was never left out as many of my friends *wanted*, not just asked, me to hang around with them at places (you name it, I was there). Soon I began a night life, going to different places outside the campus or just playing cards at college. I was sad on graduation day because I knew it was the "end of a dream."

Six other deaf people went with me to Bethany College in 1965 (four of us graduated in 1969). Two more graduated later. Hardly did we stay together except for a few nights in the dormitory when we were briefing each other on courses, our problems and our friends. This was true for only my sophomore, junior and senior years as I did stay with my deaf friends a lot during my freshman year. I got to know the friends of my deaf friends, and they got to know my friends. This helped expand our social circles.

I have little to say about the courses I had in college. I had notetakers help me with class lectures and got along pretty well most of the time.

I also attended the University of Pittsburgh for work toward a Master's degree. It was different there because the students in the Deaf Education program formed a "clique," and I was one of them. This I did not enjoy because I was comparing it with my life at Bethany College. I did not bother trying to make friends outside the "clique" at Pitt because I was working at the Western Pennsylvania School for the Deaf as a boys' counselor.

Presently I am employed at the school as a second year teacher and a director of dormitory life. I enjoy many of the hearing friends I have there. Often I am at ease when communicating with them because of my five years at two different hearing colleges.

I feel that the five years I spent at hearing colleges developed my language, speech and sense of humor to an extent where I can get along with almost any hearing person. It seems to me that I have talked about only the best things in my life. Of course, I do have problems—quite often do I have to write down things to be understood, quite often do I quarrel with my hearing friends, quite often do I get frustrated, etc. But if I did not accept all that as part of life, I would be supernatural.

Now let me reveal my secret to success—always make the first move and never wait for the hearing person to make it. So what if you seem to be a pain in the neck, the hearing person will eventually come to realize that deaf people are no different.

To conclude, I would like to say a few words about social patterns of deaf people in integrated settings. I feel that it is very dangerous to publicly interfere because the deaf people may be again branded a homogeneous group. If this occurs, the problems encountered by the deaf in trying to break through would be increased.

Trying to mix with hearing people is something to be left to the individual deaf person. He may receive guidance before integration and may quietly be counselled during integration, but the less publicity this receives, the better it will be for the deaf individual.

Let the deaf try without "eyes." Let the deaf people be individuals, not guinea pigs. Then they may be more ambitious.

Thank you.

A COMMUNITY SERVICE VOLUNTEER PROGRAM FOR STUDENTS AT THE NATIONAL TECHNICAL INSTITUTE FOR THE DEAF

William F. Yust, A.B., Ed. M., National Technical Institute for the Deaf

Introduction

During the past academic year at the National Technical Institute for the Deaf, I have been involved with a group of about 20 NTID students in, what I feel, is a very exciting program. These students have been volunteering a block of time each week to assist Rochester, New York agencies and institutions in various capacities. During the past Spring Quarter, for example, three students taught an introductory course in Manual Communication to a group of first year medical students at the University of Rochester, one person assisted the Rochester area Vocational Rehabilitation Counselor in teaching basic reading and writing to three functionally illiterate deaf men, and one student acted as a "friend" to a 14-year-old hearing boy who was becoming a "lost cause" at his public school. The list goes on, and a description of 12 student volunteers' work can be found in the appendix to this paper. One highly significant factor is that the human environment in which these students operated was almost 100 percent hearing, and with one exception, ignorant of deafness and deaf persons.

DEVELOPMENT OF THE PROGRAM

I would like to backtrack for a moment and share with you the conception and development of the program. At NTID we have a department called Co-curricular Education. The term "co-curricular" has replaced the traditional "extra-curricular" because "extra" has connotations of *outside of* the educational arena. Nothing could be more contrary than the *very* educational thrust of co-curricular or complementary education at NTID.

With this educational emphasis in mind, my division director, Dr. James Collins, and I conceived the notion of community service as a viable means for exposing some of NTID's students to a new learning experience. The term "new learning experience" was a very meaningful one for us. Look for a moment at the growing number of services being rendered to the deaf population of this country. Without saying that these services are adequate, it *can* be said that there has been little or no opportunity for young deaf adults to act in a service capacity themselves. How does a person ever realize what he is able to contribute to the world around him if he has never been given the opportunity? How can a human being ever develop self-confidence and healthy respect for his own talent if he never has the chance to prove himself? How can a person assume adult responsibility if he never has the opportunity to be responsible? Now, add to this an important but frequently overlooked fact: severe hearing impairment does not mean that there is a lid on the potential that an individual has to serve others who are not hearing impaired!

I reacted to these rather uncomplicated but easily obscured realities by realizing that our students could and should have an opportunity to test their skills and their level of maturity in an environment that will be imposed upon them eventually in the working world. Community service volunteer work seemed like a good avenue to provide this opportunity. I proceeded to contact local agencies and institutions — initially, a public school district adjacent to the Rochester Institute of Technology campus and a nearby hospital. Replies were favorable but a little anxious as the topic of communication skills evolved, the result being a hesitancy to make a quick commitment. I was prepared for this and discussed NTID and the student population in a way that did not gloss over possible communication problems, but which stressed the potential for students to be a success and an asset in a volunteer capacity.

When I had a comprehensive notion of an available volunteer position I notified students and held interviews for interested respondents. Students and positions were matched and initial interviews were held with student, school or hospital representatives, and myself. This afforded an opportunity for persons involved to interact with one another and gain a clear understanding of roles. When an agreement was reached, schedules were arranged and implementation ensued. During the course of the volunteer experience for each student, I tried to attain continuous feedback from both student and field supervisor. This procedure was followed in all volunteer placements, more structured or more loose depending on the individual set of circumstances.

SPECIFIC ILLUSTRATIONS

I would now like to share with you in detail the experiences of three first year students who participated in the volunteer program quite actively. The first student, in terms of communication skills level, has very good speech, lipreads excellently, and had attended public schools prior to entering NTID. She approached me with a stated interest in volunteering to work with people who needed help in working out problems. She took a position initially as an interpreter for a social case worker who had a deaf couple with four hearing children as clients. Prior to her first session, she was quite worried about her ability to communicate well using just the fingerspelling method (the method these people employed for communicating). She was successful and rapidly increased her role to involve discussions with the case worker on possible kinds of information that would be of assistance to this very isolated and financially unstable family. She then had the responsibility of communicating with the two deaf adults on a variety of topics, some of them quite personal and requiring the use of tact and discretion. This student "grew" through the experience in several ways: she gained knowledge about the nature and dimensions of social work in general (she has been accepted along with five other NTID students into Rochester Institute of Technology's newly created social work program); she had an opportunity to interact with adults in a work situation—attending meetings, discussing her role and the case; she became closely involved with a family who needed assistance, a family who relied on her as a person who could be trusted. Hence, we see that there was experiential growth vocationally, educationally, and personally for this student.

The second student whose experiences I would like to bring to your attention is very manual and chooses not to use his voice when communicating with people, hearing or deaf. He attended a school for the deaf before coming to NTID. He told me that he was interested in volunteering — visual technologies kind of work (photography, T.V. equipment, etc.). I had already contacted the director of a high school Instructional Media Center and had reached a tentative agreement to bring an interested student to the school to discuss a volunteer arrangement. I sensed an uneasiness in the director as I talked to him about this student's communication skills. In order to make him feel more comfortable and also to increase the potential for a positive volunteer experience, I enlisted the aid of another volunteer who agreed to interpret for the first student when necessary, in addition to assuming a volunteer role herself in the same office. What ensued was very positive: The manual student became involved in several projects with a staff member of the Media Center, learning to use his skills in a "job task"; the staff member began learning fingerspelling in order to increase direct communication with the student; the student learned about vocational possibilities for him when he finishes school; and the second student who helped interpret for him became aware of job tasks and descriptions applicable to her own academic program, in addition to having the personal satisfaction of assisting in deaf-hearing communication.

As a final positive outcome, the staff of the Instructional Media Center is enthusiastic about working with more NTID students on a regular basis.

A third student's experience is also very significant, for it describes a "failure" volunteer assignment which had positive manifestations in terms of student growth and awareness and in terms of guidelines for the volunteer program.

This student was involved assisting an elementary school teacher in creative writing lessons for several third grade pupils. Conflict arose between the teacher and the student concerning roles and responsibilities. Finally the student became a burden to the teacher and the volunteer arrangement was severed.

Initially, I was very upset about this, thinking that all parties concerned had strong negative feelings and also that future volunteer placements in this particular setting would be tenuous at best. Now, I cannot deny that there were no more placements with this teacher. Also, the failure was accepted and I did not try to replace this particular student. However, two distinct achievements were made and which I feel increase the scope of the program.

First, confronting the student with his own shortcomings in the volunteer setting led to self-insights into some of his behavioral patterns, the result being an attempt on his part to make improvements (Counseling was one means used to work with the student in this respect). Second, I learned that it would be necessary for me to receive more continuous feedback on each volunteer's activities, emphasizing honest appraisal by each volunteer supervisor. The rationale for this was that a critical situation could probably be avoided if there was a concerted effort to be sensitive to the needs of all people involved in a particular volunteer arrangement. The point in this illustration is that failure is real, it must be expected to occur, and it can be used as an educational tool as much as success.

There are several factors which played a large role in determining a student's success experience in volunteer work.

1. There is a level of responsibility which the student must assume and accept. He must understand and meet obligations.
2. The right person must fit the right job. Not every student would succeed in a given setting.

3. There must be a willingness to give by the field supervisor. He must be prepared to help the student adapt to the environment if necessary.

4. Students must be afforded the opportunity to discuss their experiences with a staff member in their school setting (relating to problems, questions, clarification).

5. There must be provisions for continuous feedback on the student's performance from individual volunteer supervisors.

FUTURE DEVELOPMENT

At this point in time, NTID's volunteer program is in a developmental state, the pilot phase having been successful in many ways. Plans are being made to increase the number of students who participate, to strengthen ties with community organizations for the purpose of volunteer placement, and to offer students an opportunity to integrate volunteer experiences into their total educational endeavor at NTID, as well as into their own personal and vocational objectives. In addition, the developmental education concept at NTID will be employed to offer students other kinds of opportunities which meet the objectives of: (1) providing opportunities to interact in the environments away from the educational setting, (2) involving students in responsible roles which demand responsible behavior, (3) placing students in situations that will test their communications skills, and (4) affording students the chance to realize that their handicap does not preclude their involvement in the hearing world.

Programs of this kind have the additional advantage of being conducted while the student is still able to return to the educational environment to deal with questions, problems and anxieties which might arise through the experience. When a deaf student enters the world of work and the total society, he makes it or does not, and has little, if any, opportunity to assess his integration with the world around him. A kind of pre-job work experience is one way of avoiding confrontation with a set of circumstances which are completely new to the individual.

IMPLICATIONS

In closing, I would like to offer the program I have discussed with you as a potential model for use in schools for the deaf. The students who participated in NTID's volunteer program were first and second year students who had attended schools for the deaf as well as regular public schools, and I cannot believe that there are not at least some students at each and every school for the deaf who have enough maturity to engage in community service. An experience like this could be helpful for secondary school students in several respects: first, it would expose the student to a hearing environment; second, it would afford an opportunity for the student to test his level of communication skills in comparatively unstructured and real situations, as contrasted with the institutional setting; third, it would engage the student on the giving end of the service balance; fourth, it would give students a first-hand look at a vocational setting which might be a potential one for them; fifth, and very significant, it would offer staff members a chance to use feedback from the students' experiences to help develop a more meaningful and individualized educational program for students.

I offer this suggested approach, as well as my entire paper, as one of many possible programs which could serve as learning experiences for young deaf adults in settings which reflect some of the social-vocational realities that the deaf must face and command to the greatest possible degree.

APPENDIX

Listed below is a brief description of the volunteer work of 12 students who participated in NTID's Community Service Volunteer Program during Spring Quarter, 1971. Appearing first is the specific agency or institution which provided the volunteer work; following is a brief description of the work itself, with the number of students involved appearing in parentheses at the end of the description.

Monroe Community Hospital: Volunteer aide who visited patients on the floor for purposes of offering companionship and initiating recreational activities (1 student).

Rush-Henrietta Schools:

(1) Volunteer teacher aide who helped in the classroom with tutoring and class projects (1 student).
(2) Volunteer assistant in the Instructional Media Center who aided with the production of visual programs for classroom and school district use (2 students).
(3) Volunteer library aide in an elementary school who assisted the librarian with any necessary tasks (1 student).
(4) Volunteer who served as a friend to a student who was becoming "turned off" to the school environment (1 student).

Strong Memorial Hospital: Volunteers taught basic manual communication to 3 medical students as part of their course requirement in the Preventative Med. Dept. (3 students).

Monroe County Dept. of Social Services:

(1) Volunteer who supervised a day nursery at that agency (1 student).
(2) Volunteer who assisted a case worker with deaf clients (1 student).

Al Sigl Rehabilitation Center: Volunteer who assisted in the teaching of basic language skills to 3 deaf men (1 student).

Day Programs

Chairman: Dr. John D. Harrington, Principal, School for Language and Hearing Impaired Children, New York City Public Schools.

10:30 a.m.–11:45 a.m.: "*The Status of the Public Day School for the Deaf in the United States 1971.*" (Based on a questionnaire sent to 30 public day schools), Dr. John Harrington, Principal, School for Language and Hearing Impaired Children, New York City Public Schools.

1:30 p.m.–4:00 p.m.: "*The Development of Kendall School into a Demonstration Elementary School for the Deaf,*" Dr. Thomas R. Behrens, Director, and David R. Updegraff, Kendall School, Washington, D.C.; "*A Public Day School in Inner-City Newark,*" Richard S. Cooke, Teacher, Bruce Street School, Newark, N.J.; "*The Need for Objective Evaluation of the Status and Goals of Comprehensive Public Education Programs,*" Dr. Harriet Green Kopp, Professor, Department of Speech Pathology and Audiology, San Diego State College; "*Gallaudet School for the Deaf—A Public Day School in St. Louis, Missouri,*" Lewis B. Wahl, Principal and Supervisor of Hard of Hearing and Sight Conservation Classes, Gallaudet School for the Deaf, St. Louis, Mo.

INTRODUCTORY REMARKS

Dr. John D. Harrington

This is the Day Program Section of the 45th Biennial Convention of American Instructors of the Deaf. Our topic—day school programs—is most timely because of the large increase in the number of day school programs for the deaf which have been established in the United States in recent years. It is estimated that 50 percent of all deaf pupils are now being educated on a day school basis. We have noted in earlier sessions of this convention a tendency for states and large cities to move towards local responsibility and local funding. A committee of the Conference of Executives of American Schools for the Deaf will be preparing suggested guidelines for minimum standards to be referred to in relation to the establishment of local day school programs. Day school programs can be effective if the basic needs of teacher training, supervision, class grouping, appropriate equipment and other educational essentials are met.

My paper today is based upon a questionnaire which was sent to 35 large public day schools. The aim was to reach all types of public day schools but particularly those in the inner cities.

Thirty returns were returned. We've learned that some public day schools are funded entirely by local authorities, some are partially funded on a local basis and some are completely state supported. Thus, we are looking at *public day schools* and drawing some comparisons on the basis of the amount of local and state support.

It is hoped that this presentation will stimulate discussion on the basic problems and circumstances of public day schools for the deaf in the United States at this time.

Presenting various additional aspects of the day school programs this afternoon will be the following speakers (listed alphabetically.)

Dr. Thomas R. Behrens, director, Kendall School, Washington, D.C.
Mr. Richard Cooke, teacher, Bruce Street School, Newark, N.J.
Dr. Harriet G. Kopp, professor, Department of Speech, Pathology and Audiology, San Diego State College, Calif.
Mr. Lewis B. Wahl, principal, Gallaudet School for the Deaf, St. Louis, Mo.

THE STATUS OF THE PUBLIC DAY SCHOOL FOR THE DEAF IN THE UNITED STATES

John D. Harrington, Ed. D., principal, School for Language and Hearing Impaired Children, New York City Public Schools

In the United States deaf children are educated in a variety of settings. Historically, the residential, state-supported school was the first pattern of organization used and until recently has been the most commonly used approach. Day schools, however, began as early as 1869 and in recent times we have witnessed a trend towards the day school pattern applied in a variety of ways. Residential schools have encouraged increasing numbers of their pupils to attend on a day basis and recent estimates by the Office of Demographic

Studies at Gallaudet College indicate that close to 50 percent of all deaf pupils are now being served in either day classes or day schools. It is the purpose of today's panel to focus specifically upon public day schools supported primarily by local funds and most specifically upon those in the large inner cities of the country.

As principal of one of the two large public day schools conducted by New York City, I have been interested in how the inner city public day schools across the country have been faring as related to state-supported programs of which a larger proportion appear to be partially or fully residential. It is recognized that the public day school for the deaf has not been the predominant mold for schools for the deaf. Only recently has their number grown to any degree.

It is also realized that state funds whether partial or extensive, directly or indirectly channeled, do support some local day public schools for the deaf as well as residential programs.

A simple questionnaire was prepared and sent to the executive heads of 35 public day schools with a population of over 100 students which were listed in the public day school category of the most recently available directory issue of the *American Annals of the Deaf*.

The questionnaire dealt with: funding, public relations and image, pupil population, coordination with state-supported and residential programs, teacher training, quality of education, and the recognition given to day school education at public conventions such as this Convention of American Instructors of the Deaf. The questionnaire sought to identify the feelings and opinions of the respondents concerning public day school education; it did not pretend to be scientific. Thirty very interesting and informative responses were received and will serve as the basis for today's presentation and discussion. A copy of the letter and questionnaire sent to public day schools will be shown on the overhead and placed in the appendix to this paper. This afternoon's session will consist of a number of brief talks by selected superintendents and principals involved in the survey who have interesting facets of the day school picture to share.

The first of ten questions asked how the school was funded. Public day schools appear to be supported in a great variety of ways as follows:

(a) State-funded, completely or predominantly.
(b) Locally-funded with significant direct state support.
(c) Local-funding with state reimbursement for excess costs or partial or indirect state support.
(d) Locally-funded only.
(e) Tuition.
(f) Federally-funded (Kendall, to be).

Within these groupings there are variations and it is recognized that "local funding" may be indirectly state financed (as in New York City). Yet, a fairly clear pattern emerges from the relationship between the funding question and the question "Are your funds sufficient or near sufficient to meet the needs?"

State-supported and state-reimbursed programs expressed satisfaction concerning the level of funding. The schools which felt there was an inadequate level of funding were predominantly local or city-supported day school programs or programs in which state support was indirect or not ear-marked for the education of the deaf in the public day school. In several major instances public day schools indicated that funds were ample for operating expenses but deficient for construction, buildings and equipment. These instances were New York City and Newark, New Jersey.

Those that felt funding was *inadequate* answered the question as to how they were funded as follows:

(a) Under the public school system. Real estate taxes.
(b) City—75–80 percent; State—20–25 percent.
(c) Tuition from local school boards and/or parents. Some federal funds.
(d) School district funds later repaid by the state.
(e) City—50 percent; State—50 percent.
(f) Tuition and donations.
(g) Local funds plus $800 per class from the state.
(h) City funds with partial state reimbursement.

It is significant that *every* state-supported or largely state-supported school, with no exception, felt that its funds were sufficient or near sufficient to meet needs. On the other hand, most of the schools which reported inadequate funding expressed the opinion that they receive *less* in the way of funds than schools with significant state support. Thus, it seems clear that inner city day schools for the deaf of which the majority are locally-funded and which perhaps need the best level of funding are struggling to meet their problems with marginal funding provisions.

It would appear that federal funds should be channeled predominantly to areas of maximum need. With this in mind the question was asked, "Do you receive federal funds on a basis comparable with state-assisted schools in general?"

Once again a pattern emerged—the more state support, the greater the feeling that federal funds of sufficient and equitable amounts have been forthcoming. The schools that report larger proportions of local or city support also indicate lower levels of federal funding. And again it is the city public day schools reporting unfavorable relative positions with respect to the obtaining of federal funds (Detroit, New York, Baltimore, Cleveland, Dayton, Newark).

Some respondents quite honestly expressed a lack of knowledge as to the relative amount of federal funding given to state-assisted and city public day schools. California schools seemed to feel that they get only limited amounts of federal funds although all California schools are state assisted. Small schools of all types reported unfavorable positions in federal funding because of per pupil allocations which favor the larger state-supported schools. Others indicated that insufficient personnel allowances precluded the planning and writing of grant proposals.

How about opportunities to conduct programs of public relations and research? The city day schools are definite on this. They feel that they are in an unfavorable position with respect to public relations opportunities and research. However, schools with larger amounts of state support are somewhat uneven in their perceptions of their position regarding public relations and research. Some feel they are able to conduct effective public relations programs but unable to participate in meaningful research. A number of state-assisted schools also feel weak in public relations and research.

The opinion is often expressed that there is a difference in the pupil population served by the various types of schools for the deaf. The locally-funded public day schools were asked whether they felt that their pupil population was different from that of schools receiving larger proportions of state support. City public day schools were very explicit in expressing their opinion that they serve a different population while largely state-supported schools were more scattered in their responses to the question.

Cleveland: different.
St. Louis: lower socio-economic minority groups.
Columbus: different.
Washington, D.C.: inner-city.
Philadelphia: different.
Newark: very different (60 percent black, 26 percent Spanish-speaking, 14 percent other).
New York City: "absolutely".
Baltimore: must provide for multiple handicaps.
Detroit: more heterogeneous.

Almost all other responses to the question indicated similarity of pupil population, gave no answer or simply stated that they *were* "state schools". Some California respondents felt that the "state school" probably had more multi-handicapped and slower learners and that "those students that can make it stay in their home schools." It is not surprising that "state schools" had fewer moderate to severe hard of hearing children than local city-supported programs, or that more of the students at the "state schools" have deaf parents.

Is there fruitful coordination between locally funded day schools and state-supported schools in the same geographic area?

Cleveland, Columbus, Washington, D.C., Philadelphia, Newark, New York and Detroit would like to see more coordinative endeavor between locally-supported and state-supported schools. Most of the schools with considerable state support are pleased with coordinative efforts in their area.

One area of cooperation cited is the transfer to "state schools" by locally-funded schools of older deaf students needing secondary programs. In some instances, disappointment was expressed that students were sometimes not accepted.

State departments of education have been conducting efforts to coordinate locally-funded programs and state-supported programs in several areas. In the New York City Metropolitan Area the city Board of Education and the State Department of Education are seeking to develop regular coordinating sessions between locally-funded and state-supported schools in the area. Also the Board of Education is pressing for the establishment of a Bureau for Hearing Handicapped Children to effect improved programs for hearing and language impaired children in the City. San Antonio is finding a planning and coordinating committee effective in coordinating local efforts. Portland is using a Cooperative Council.

One respondent described local cooperative efforts as "verbal".

It is generally of considerable value for a school for the deaf to be associated with a college or university that trains teachers. The responses from locally-funded and state-supported schools here were scattered with both types indicating the presence of cooperative programs. Yet, once again, four large locally-supported schools reported no college-related teacher training program. It is notable that the majority of schools do assist directly in the training of teachers. There is, however, the conjecture here that the training of teachers of the deaf is possibly more related to the pupil populations of state-assisted programs for the deaf than to the nature and needs of deaf pupils in city public day schools for the deaf. It would then follow, at least to some degree, that a number of teachers of the deaf enter their particular classroom experiences with a kind of training that was not related to the type of deaf children ("different") with whom they will be working.

As we approach the conclusion of this analysis, it might appear to us that the city public day school image, self-projected or otherwise, is not a very positive one. One of the questions addressed itself to that and the responses were very interesting. No real pattern emerged, but it was clear that the locally-funded public day schools have as good a self-image as the state-supported public day schools. Some of the more interesting comments are recorded:

1. "Lack of money is blamed for a decline in program but teacher training is the crux."
2. "Image and quality depend upon the product of a school."
3. "State school has a beautiful enticing campus, better equipment and more staff."
4. "Most parents prefer to have their children in a day school setting."
5. "State-supported schools have a close relationship with the state politicians and a select population."
6. "This school (public day) is more diversified to meet the needs of the multi-handicapped child."
7. "We work together and support each other's philosophy and methodology."

In response to questions related to the quality of educational programs, some respondents differentiated between elementary and secondary levels in the education of deaf children. Many public day schools stated that state-supported programs appeared better able to meet the needs of secondary school deaf students particularly in vocational education. Yet, some considered the self-contained high school programs more typical of the state-supported school and felt that the integrated approach of many locally-funded day schools was a more suitable approach.

One question dealt with the amount of attention or recognition given to locally-funded public day schools as compared to that given to state-supported day schools in professional organizations and at major professional conventions such as the one we are now attending. The locally-funded public day school programs responded with a somewhat resounding "no". Several respondents pointed out that the "public" day schools, for the most part, are still in session as of the dates of this convention, making it very difficult for them to be involved and a number of others mentioned that such attendance was not funded for them. "Only token recognition to city problems is given. Inner city parents rarely attend as they are too burdened with economic problems." Some day public school personnel feel that they would be sharing their problems with "uninterested listeners".

One respondent urged more communication with special education programs other than those for the deaf.

Some state-supported public day schools also felt that conventions appear to be developed by those "in residential programs serving populations with different needs." In summary, here, it seems clear that "there needs to be a much greater focus on the public day school programs." To pay fair tribute to another form of professional communication, both public day and state-supported schools receive excellent guidance from the major professional organizations.

I am not going to attempt to derive a general summary other than what has already been presented. It is my hope that the discussion which follows and the papers and discussions this afternoon will provide generalizations based upon the exchange that takes place within the group.

This is the "Day School" Section as planned by the Convention and it is our opportunity to have a fruitful encounter concerning the problems and the strengths of public day school education in the United States in 1971.

APPENDIX

SCHOOL FOR LANGUAGE
AND HEARING IMPAIRED CHILDREN,
New York, N.Y.

DEAR COLLEAGUE: I have been asked to chair the "Day School" section of the Convention of American Instructors of the Deaf in Little Rock, Arkansas (June 27–July 2, 1971). I've agreed to attempt to formulate a plan of presentation.

It occurred to me that the section might focus upon inner-city public day schools for the deaf and their special problems. We might well be able to define some specific needs shared by public day schools and some specific strengths enjoyed by such schools. I would define as a public day school, for these purposes, one which is supported entirely by local funds as opposed to being a private school subsidized by the state either totally or on a pupil-by-pupil basis.

As an early exploratory stage, would you be good enough to respond to the attached one page sheet which will give me an idea as to what the general picture might be.

Sincerely,

JOHN D. HARRINGTON,
Principal.

RESPONSE SHEET—PUBLIC DAY SCHOOLS U.S.A.

Name of School ____________________ Name of Chief Administrator ______________________

1. How is the school funded?
2. Are your funds sufficient or near sufficient to meet the needs?
3. Do you feel that you receive less in the way of funds than schools with state support?
4. Do you receive federal funds on a basis comparable with the private state-assisted schools?
5. Are you able to conduct programs of public relations and research on a basis comparable with local state-assisted schools?
6. Do you find that you are serving similar or different pupil populations as compared with state-assisted schools.
7. What degree of local coordination or mutual cooperative planning exists between your facility and that of the state-assisted schools?
8. Do you have college-related programs in teacher training and research? How do they compare with those of the state-supported schools?

9. Do you find it difficult to maintain an appropriate image of excellence and quality education in relationship to the state-supported schools?

Why? (Whether answer is yes or no)

10. Are your special needs and problems as a locally funded school recognized or discussed in the major professional organizations or conventions in the area of the deaf?

Other thoughts or comments:

Would you be interested in and willing to be a part of a *panel discussion* at Little Rock of the types of problems related above with the possibility of a position paper evolving from the session?

(Name of Administrator)

THE DEVELOPMENT OF THE KENDALL SCHOOL INTO A DEMONSTRATION ELEMENTARY SCHOOL FOR THE DEAF

Thomas R. Behrens, Ph. D., Director, Kendall School, and
David R. Updegraff, M.S.W., Assistant Director, Kendall School

First, I would like to take this opportunity to thank everyone who helped the Kendall School and Gallaudet College obtain this new legislation, which we all consider the greatest landmark in the 115-year history of the Kendall School.

Public Law 91-587, signed by President Nixon on December 26, 1970, is an act which modifies and enlarges the authority of Gallaudet College to maintain and operate the Kendall School as a demonstration elementary school for the deaf, serving primarily the National Capital Region. Just yesterday evening, we received notice from Washington that our budget amendment request has survived, and we now have the green light to begin planning next week.

The act makes provisions for day and residential facilities for elementary education for children who are deaf, in order to prepare them for high school and other secondary study, and to provide an exemplary educational program to stimulate the development of similar excellent programs throughout the nation.

In this act, the term *elementary school* means a school which provides education for deaf children from the age of onset of deafness to age fifteen, inclusive, but not beyond the eighth grade or its equivalent. The act further makes provisions for the construction of new buildings, and the expansion, remodeling, and alteration of existing buildings and equipment. Furthermore, the act requires that in the planning and construction of the facilities, maximum attention be given to excellence of architecture and design, innovative auditory and visual devices, and installations appropriate for educational implementation of such facilities.

Let me briefly give you the historical background of this legislation. During the year 1969 and 1970, a special committee of nine outstanding individuals with nationally recognized talent and strong commitment to deaf persons developed for Gallaudet College a challenging document entitled *The New Era.* The committee was headed by Miss Mary E. Switzer and established important goals and priorities for Gallaudet College for the next five to ten years.

In recommendations concerning the Kendall School, this committee envisaged the possibility of making it a model elementary school for the deaf. It considered this an especially valuable option, inasmuch as the Kendall School has heretofore been innovative and has demonstrated many useful techniques for educating young deaf children long before those techniques became generally accepted.

The committee was also aware of the need for the re-evaluation of the role of the Kendall School, which has for more than a century served young deaf children from the Metropolitan Washington Area. At the same time, the school is a practice teaching facility for the teacher preparation program at Gallaudet College.

During the sixties, public schools began to offer programs for hearing impaired students. Not long ago the Maryland School for the Deaf established a new campus in Columbia, Maryland, which is about twenty miles from Washington. Further, Gallaudet College and the Department of Health, Education, and Welfare reached an agreement to establish and operate a model secondary school for the deaf on Kendall Green. In essence, it was this turn of events which brought forth the need to develop the Kendall School into a demonstration elementary school for the deaf where experimentation, research, and dissemination of its findings would justify its existence, as well as where deaf children could prepare to take advantage of the new pre-vocational and secondary educational programs for deaf youths.

The implementation of *The New Era* recommendation, as well as the fulfillment of the Congressional mandate of Public Law 91-587, will have immediate as well as long-range and far-reaching effects on the field of deaf education.

We see six immediate implications which have come about through Public Law 91-587.

1. The Law provides that the Kendall Demonstration Elementary School for the Deaf shall be a tuition-free institution, with all its funds provided by the federal government.
2. The Law provides that the students shall be admitted from the age of onset of deafness and shall be maintained through the age of fifteen.
3. The Law provides that parent education and counseling shall be an integral and on-going part of the total educational process.
4. The Law provides that extensive clinical and diagnostic facilities shall be made part of the total educational program.
5. The Law provides that a flexible residential program shall be set into operation.
6. The Law provides that new construction include remodeling of the present academic building to suit the needs of a demonstration elementary school, and the building of a clinical and parent education complex and new residential facilities.

Let me elaborate briefly on the provisions I have just enumerated. The tuition-free clause was included for two essential reasons: (1) To give parents in the National Capital Region a free choice of where they can send their children; and (2) To establish the concept of free education for the deaf regardless of age of the child. In our area, most of the pre-school deaf programs are private and require a tuition fee. The majority of the parents of children presently enrolled in the Kendall School are financially unable or are able only on an extremely limited basis to provide any kind of pre-school education for their children. On a tuition-free basis, the pre-school *must* become a full-day educational program.

Our profession has sufficient knowledge for the implementation of such a program, and I need not tell you that young deaf children must have more than one hour of therapy each day, as most present programs are set up. We further see this need primarily for a metropolitan area in which many children will be spending their early years in day-care centers. During these years, the child who is deaf, as we all know, is in need of a highly specialized program. We hope to demonstrate the value of such a full-day program for very young deaf children. Therefore, it is necessary to combine the concept of tuition-free education and the full-day educational program.

Strong provisions are made for parent education and counseling leading to the greatest degree of parent involvement in the school so that controlled, research-oriented projects can be established to determine the long-range effects of such involvement. The extensive parent involvement will be particularly strong with regard to pre-school children. Ideally, the Kendall School involvement will begin with the child as soon as the handicap of deafness is identified. Parents should be trained and encouraged to work properly with their child at this crucial time. We envisage that parents will live at the Kendall School for periods ranging from a few days to a few weeks, allowing for close, informal working relationships with our professional staff. During this period, extensive diagnostic examinations and testing must be carried out to help the parents understand the nature of their child's handicap and what they must do to help the child adjust.

The provisions for extensive clinical and diagnostic facilities were included in order for the school to thoroughly screen its applicants, conduct continuous re-evaluations, and monitor over-all student health to a greater extent than has previously been possible. It has been demonstrated that children are in constant need of better preventive health care, and it is hoped that such a program will enhance the intellectual and social maturation of young deaf children living in the Metropolitan Area. We all know this evidence can only be obtained if the children can be observed on a long-range basis by a comprehensive multi-disciplinary team of professionals.

The provisions for a flexible residential program were made based upon the school's previous experience that different children need different types of residential care. The program needs for a residential facility are envisaged to be as flexible as possible and as child-oriented as possible. The needs of some children can be best served by the standard type of dormitory facility. Other children, however, grow faster in a group-home concept of residential care which could be located out in the community. The needs of children change. Some children at times can profit more from living in their own homes, yet for short periods may benefit from living together with other children who are deaf. Consequently, a rigid dormitory situation would not meet the needs of all the children it would serve.

Finally, a further provision is made in the Kendall School legislation, which is seen in its long-range effect on deaf education programs throughout the nation. This provision is that, in becoming a demonstration elementary school for the deaf, the Kendall School has an obligation to disseminate its findings on new techniques and approaches in education of the deaf to the entire field.

We at the Kendall School are fully aware that implementing such a chart of programs can only be done successfully with the help of each of you. We assure you that our biggest hope is that the Kendall Demonstration Elementary School for the Deaf can help other programs for deaf children, be it through curriculum development, pedigogical approaches, and/or the organization and coordination of various programs. We must realize that this is a federal program, and therefore one belonging to each of us.

All of us must become involved so that in the future the Kendall School program can assist in the improvement of deaf educational programs throughout the country. Therefore, we invite you to become actively interested in the program: visit our school, ask questions, make suggestions, and give close attention to our findings. Remember, our purpose—and your purpose—as educators, is to help children develop the resources and potential which will enable them in later life to encounter— with greater odds for success—the hearing world.

THE NEED FOR OBJECTIVE EVALUATION OF THE STATUS AND GOALS OF COMPREHENSIVE PUBLIC EDUCATION PROGRAMS

Harriet Green Kopp, Ph. D., San Diego State College

It is time that we, as educators of the deaf, begin to apply the standards by which we measure education in general to the assessment of deaf students. Our historic concern with communication modes, in this country, has tended to obscure the equally difficult task of developing cognitive skills and knowledge. We have seen education of the deaf shift from a predominantly residential school pattern, public and private, to what appears to be an increasing population of elementary day schools and classes in all but our rural populations. The preponderance of secondary level students are still enrolled in residential schools—largely because the day classes and schools have not been sufficiently active in developing the concept of the comprehensive regional secondary school. It is not possible to meet the needs of secondary-age students unless a comprehensive vocational and academic program can provide both educational opportunities and supportive services.

In part, our present distress reflects the changing nature of our deaf population. Medical advances have diminished the proportion of adventitiously deaf students who became deaf post-lingually. The mastoid, measles, scarlet fever, chronic middle ear infection cases are less frequent. Instead, we find significant increases in the numbers of premature, rubella, viral in utero cases resulting in multi-handicapping conditions of which hearing loss is only one of a number of serious problems. Our teaching models, our educational systems, our facilities and our basic philosophy of education have been predicated upon the problems faced by the post-lingual and the uni-handicapped student. We are just beginning to look at the wider spectrum of problems with which we are confronted. It will require massive reorganization of our conceptual framework.

In addition, the improvement of amplification systems and the tremendous strides resulting from infant and pre-school programs have increased the numbers of students who are capable of being integrated at various entry points into the mainstream of education. Here, too, our delivery systems must be different if we are to provide maximal educational opportunities. The mix of services required, the greater involvement of team teaching or resource teachers, of hearing schools and teachers of hearing students, make it necessary to rethink our educational approach to these severely hard-of-hearing children who in the past were categorized as profoundly deaf.

We have taken a belated, long hard look at the academic achievement of our deaf students. We are concerned with the extent of the difference between performance and verbal test scores. We refuse to accept the necessity of an inferior academic track record for our deaf pupils. It is not enough to have an occasional brilliant deaf student with strong parental support, who "makes it." It is not necessary to repeat here the findings of study after study that tell us what we already know too well. In general, our deaf population is not reading well; is not adequately informed in subject matter; is not functioning at an educational level consonant with intellectual capacity.

The steadily mounting cost of education makes it essential that we re-evaluate our priorities. It is high time that we examine the cost effectiveness of our programs and weigh our options on the basis of value to students. In the past 10 years, there has been increasing financial pressure on private schools. Despite the complex legalistic support patterns for reimbursement on state and local levels, the facts reveal that many hitherto private schools derive significant segments of their funding from public monies. The distribution of student population has not always kept pace with the funding pattern. Historically, the public school has been service oriented and non-selective, by law, in its admission criteria. Interpretation of these criteria for deaf students has varied widely. When public funds are used, there is an urgent need for admissions criteria to be in the public interest to the end that all hearing-impaired students are served in a manner appropriate to their needs. Yet, we have no guidelines for admissions criteria. Conversely, we have no recommended guidelines for exclusion nor do we have identified referral sources for those students who are excluded.

Much as the present delivery systems are inappropriate to our changing population, so, too, are our teacher preparation programs. At present, our professional associations are engaged in revising standards for teacher preparation, a long delayed outcome of the Virginia Beach Conference. Until our teachers of the deaf come to the classroom with a strong background in learning theory; assessment concepts and techniques; communication skills; school subjects; and, with a strong conceptual background in teaching and learning including practicum experience with both hearing and deaf students, we will have little potential for closing the academic gap. We have made and are making good strides toward improving teacher preparation. Assistance from Federal funding has had more beneficial influence and more dramatic effect on this area than on any in our profession, both in pre-professional and in-service preparation. Here we must be very careful not to substitute techniques and equipment for knowledge. It is easier to spend our time making transparencies or in preparing mediated materials than in understanding cognitive processing or longitudinal assessment. We must be on guard to assure that our teachers understand "why" and "how" as well as they do "what."

We have made little progress in developing criteria for supervision of classroom teaching. This is probably the area to which we must now give maximal support. Without knowledgeable and sophisticated supervisors, individualization of teaching and maximal effectiveness of teachers become difficult to achieve. The need for supervision is especially evident in day classes, particularly those scattered rather widely over sparsely populated geographic areas. We have tended to avoid direct confrontation with local administrators of day class programs who are often not prepared to supervise the education of hearing-impaired students. We must take a strong position with positive statements of criteria for supervisors with respect to their preparation, experience and job analysis.

Proliferation of day classes in the last 25 years has generated particular problems. The supervision of these classes is apt to be a "sometime" thing, accomplished occasionally by a qualified professional. Regular supervision is often the task of an administrator of hearing programs who is awed by the linguistic and communicative problems of the hearing impaired, and impressed both by the vivacity of the teacher of the deaf and the multiplicity of teacher-constructed materials. Unfortunately, this awe is translated too often into a failure to ask some hard questions about academic progress and inability to judge the level of improvement in communication skills. The day class teacher is too often geographically isolated from professional colleagues who could boost morale and assist in professional value judgements. In addition, the day class may include students with a wide range of disabilities, age and learning abilities. Thus the day class teacher may be responsible for the most difficult type of teaching situation but receive the least valid supervisory assistance. Since about 50 percent of our deaf students are now in day classes and small day schools, it is essential that we propose a system for continuing evaluation of these programs. Regional conglomerates or consortiums that cross state and county lines will be necessary for effective use of diagnostic, supervisory, and evaluative personnel and for efficient distribution of students, to make teaching and learning possible. Satellite programs related to a regional school may provide the most effective plan.

The day class and residential school populations have varied somewhat in the past. As residential schools have lowered their age at entry and have enrolled more day students, this difference has diminished. The increasing population of multi-handicapped hearing impaired children has put pressure on admissions criteria that has generated widely varying solutions. A regional plan would make it possible for each region to marshal its particular resources of facilities and personnel, to avoid duplication of effort and to assure efficient delivery of required services. Because local needs vary so widely, the plans will have to be designed by local teams familiar with local and regional assets and liabilities. Of special concern to parents, community and educators are exclusion criteria and the development of training resources for those students not admitted to educational programs. State and federal funding also impose specific admission criteria and often certain programmatic criteria on local programs. The needs of secondary students can be met only through regional cooperation since they must have opportunity for vocational specialization or academic pre-college education in a comprehensive secondary school setting. In urban areas, this is possible by establishing classes within secondary schools or by use of resource teachers. For sparsely settled communities, the regional secondary school for the deaf may be the most feasible solution. The ultimate solution will have to provide for adequate supportive services and bona fide secondary school programs. What passes for secondary education in some of our programs is a continuation of the elementary curriculum in a secondary school with token integration in a few vocational classes. We recognize the seriousness of this problem, but have done little to provide viable solutions.

Along with the day class has come a widespread wave of integration. The interpretation of integration of hearing impaired students ranges from full-time attendance in hearing classes with supportive services provided by a qualified teacher to full-time enrollment in special classes for the hearing impaired and part-time attendance with hearing students in carefully selected classes. The value of integrated activity must be assessed with great specificity for each student. We have no valid data on the effectiveness of integration. We do have quantities of anecdotal and subjective evidence which point clearly to benefits derived by certain individuals in specific situations, and to massive failures in other situations. To date, we have no basis for prediction of success nor for evaluation of programs. Who gets placed where and when to receive which program is still based on intuition or trial and error, rather than on a profile of criteria related to various options.

When we attempt to project goals, the absence of objective criteria becomes apparent and makes prediction an astoundingly difficult task. It is time for the profession to turn its attention to the development of standards, criteria and instruments for assessing the relative effectiveness of those methods that have been the subject of much heat and too little light. The emotional climate seems more receptive now than it has in years past, to the scrutiny of where we are—so we know where and how we can proceed.

We need standardized tests that will assess: language competency output in written and oral form; language input competency in auditory, lip reading and manual communication; and speech intelligibility. Only after such tests are available and teachers and administrators become expert in their interpretation, can we begin to assess the effectiveness of methods. It seems almost incredible that we still have no valid instrument by which we can evaluate language although we agree that language is our most important product.

Standard achievement tests are available in subject matter fields and need to be used more widely, with norms for hearing students rather than establishing norms for the deaf. Either you understand arithmetic concepts or you don't—to establish deaf norms is a "cop out." Our curriculum should reflect the deficits we diagnose in testing and aim specifically at reducing them.

Good diagnostic reading tests can serve two purposes: to teach us how to prevent the problems that persist and to direct remediation of those problems that are not prevented.

Longitudinal assessment records permit staffing on a continuum. Parent-school interaction can help in recognition of individual assets and liabilities prior to decision making periods. We tend to program more toward remediation of weakness than to emphasis on areas of strength.

Criteria for teaching and supervision must be delineated. We tend to back away from judgement, but until we have accepted standards for performance we will have no quality control within our profession. In effect, we have captive audiences. Children can't change teachers at will nor can teachers change administrators nor administrators teachers. Until we can define the characteristics of success in teaching, it will be difficult for us to be truly effective in preparing teachers or in selecting administrators. Although we share this problem with general education, we are not thereby excused from moving forward in finding viable solutions. Our professional organizations have joined together to develop standards for teacher preparation programs, perhaps we can proceed now to performance standards.

We are assailed from all sides by accountability. We have always held ourselves responsible for our students' welfare and progress. Now, in the age of the computer, we are asked to objectify this responsibility. Our professional associations must lead the way.

The task of educating students from age 3 through adulthood, ranging from hard of hearing through deaf, some of whom have one or more added disabilities is awesome. With a small population, we try to cover all of the subjects offered by comprehensive programs of general education in addition to the development of language and communication skills. If we are to reach the goal of educating our students to their potential, how we apply learning theory must be derived from hard facts about the learning styles of the deaf which we have not accumulated to date. Funds must be set aside both federally and locally to explore objectively the learning modes that appear to be most effective and to disseminate learning materials. The resources of Captioned Films, the National Media Center and the Bureau of Education of the Handicapped are available and are being used now for professional development. The enormous expenditures made for the special institutions: Gallaudet, the National Technical Institute for the Deaf, the Model Secondary School for the Deaf and the Kendall Demonstration School, will be watched closely by the profession to assure that benefits are derived for the deaf in all parts of the country and at all levels. Research projects must be designed specifically to develop standards for assessment and ways of evaluating the cognitive skills and knowledges of the deaf, especially in language related areas. In short, the time is now for us to take the long hard look at where we are, where we want to be and how we are going to get there.

GALLAUDET SCHOOL FOR THE DEAF—A PUBLIC DAY SCHOOL IN ST. LOUIS, MISSOURI

Lewis B. Wahl, M.A., M.S., M. Ed., Principal,
Gallaudet School for the Deaf

The thrust and content of this paper is a reflection of the author's role as administrator of a day school program during the past decade. The approaches to alterations in those areas of the ongoing offerings of the school, academic and co-curricular, are recorded in view of the 100+ student population being served, the high quality of the professional teaching faculty, and as a potential source of adaptation within the reader's program.

Selected phases of the Gallaudet School structure are herein stated in view of the apparent notorious traditional weaknesses in many of our day educational programs for the acoustically handicapped. The attacks on our problems at the Gallaudet School were undertaken in the perspective of the salient fact of a student population with a mean intelligence quotient ranging from 80-84 points during the decade. Those day programs possessing a more normal bell-curve of intellectual distribution, permits a more traditional approach to the education of the hearing impaired.

The Gallaudet School and the professional staff have geared its innovative procedures to the gamut of multihandicapping conditions evident in the majority of its student population.

Systematic Structuring of Sequential Language Arts and Individualized Student Evaluations

Following the adaptation of the basic Language Arts Curriculums, it became apparent there existed a need for an orderly progression of individualized student evaluations on a continuum basis. Therefore, we set out to develop a systematic set of curriculum related forms to function in the two specific areas:

(1) To permit the classroom teacher to exercise an exacting approach to what she is to teach, when she is to present the sequential materials, and to base her daily teachings upon each child's past cumulative evaluation records.

(2) To permit the supervising teacher-in-charge to evaluate each individual student at the Primary and Intermediate Departmental levels biannually and to develop the inservice continuity from one stage of language arts acquisition to the next.

This approach has permitted the following operations to become significantly functional:

First, an esprit de corps developed among the instructional faculty. Each teacher has access and knowledge of the specific attainments and deficiencies of their new students commencing at the initial stages of each school year, thus alleviating the former fumbling which occurred yearly. The student evaluations are detailed sufficiently in the realm of basic communication skills to formulate precise judgments on each child and thereby aid in student placements within the total structure of the program.

This innovation has proven to be of rather striking significance in the teacher to teacher progression, counseling and reporting with parents, and in the referral services of students to other agencies and schools for the deaf.

A WORD ON PUPIL PROFILES AND REPORTING TO PARENTS

In recent years our parents have become more sophisticated and intellectually concerned in regard to the data acquired on their children by the school.

We have developed a frank and systematic procedure for reporting to parents. Pupil profiles are enclosed with the quarterly Pupil Progress Reports at mid-year and again at the termination of the school year. These profiles are prepared by the teachers involved with each child within the academic milieu, the co-curricular instructors in physical education and practical arts and all school related activities are reported. We delve into behavioral attitudes and general conduct, respect for authoritarian figures, even lunchroom manners. Helpful suggestions are recorded for the parent, and their response has been most gratifying.

In reference to academic failure and the grading system, we have solved a former major problem. By recording the "actual level of work" on the Progress Reports, a child is thereby able to acquire a commensurate passing grade. This simple form of reporting has clarified the status of the child's level of study in each area of school learning, permitted the multihandicapped child to experience success, and has given to the parent an honest and factual profile. There is an inherent motivating element built-in for each child at his respective level of abilities. The system also has curtailed the misleading of parents into the belief their child is functioning at an unrealistic level.

A second feature of reporting which has been gratefully received by parents, is the inclusion of all standardized achievement test scores with the final Progress Report of the school session. This procedure adds a third dimension for parental appraisal of their child's total school attainments.

DAILY CLASSROOM SUPERVISION—IMPERATIVE TO SUCCESS

One of the notorious weaknesses of many day programs has been the inadequacy of professional leadership with the classroom teachers as they pursue their daily academic program. The ongoing grass roots classroom learning environment must have continuity, inservice guidance provisions for the newer faculty members, and checks and pupil evaluative measures beyond the traditional formal testing measures.

The involvement of the supervising teacher-in-charge is the key to success or failure of the intraclass activities. The orderly and systematic progression of the curricular milieu is dependent upon the quality of an institution's front line supervision.

The Gallaudet School perceived the need for this addition several years ago. Any degree of creativity and developmental programming for our children with the follow-up on a consistent basis, can be traced to the knowledgeable and dedicated know-how of our full-time teacher-in-charge.

The administrator establishes and executes policy, instigates innovative program change, selects personnel best suited for the tasks under consideration, and a multitude of public relations and school related functions. Yet the fact remains, if optimal intramural learning conditions are to exist for our children, it will only be accomplished through adequate day to day supervision by personnel dedicated and charged with this single responsibility.

The State of Gallaudet — Highlights of a Decade, 1960–70

During the decade, 1960–1970, the Gallaudet School for the Deaf embodied the following changes:

1. The student population increased from 78 students to a peak in 1967 of 112 full time students. The decade ended with an enrollment of 101 children.
2. The instructional faculty increased to 18 members.
3. A formal Physical Education program was instigated.
4. Teachers applying for positions at Gallaudet became available for vacated or newly created positions in excess of our needs.
5. Grants and fundings in excess of $50,000.00 were secured for the following:
    (a) Two faculty members to execute the program for the Multihandicapped Deaf of Gallaudet.
    (b) The first Gallaudet Summer School was operational for one-half of the total enrollment (1969).
    (c) Wireless auditory training systems (EFI) became a reality in the classrooms.
6. Classrooms were equipped with audio-visual teaching aids, overhead projectors, screens, filmstrip projectors. Teachers had access to opaque projectors, EFI flashcard readers, controlled reader materials, microprojectors, televisions, radios, 8mm Technical Sound Cartridge projectors and accompanying language instructional films, and a massive variety of teaching materials provided through Federal, State and local allocations.
7. A dormant gymnasium dressing room was converted to a Materials Center and office conference room.
8. The Gallaudet students were included in a new lunchroom environment in the newly constructed Work Study High School.
9. Teachers' salaries almost doubled during the decade. The average salary for the Gallaudet teaching faculty in September, 1970, was $10,600.00. The beginning salary for the A.B. degree at the end of the decade, was the maximum salary at the beginning of the decade.
10. The average student performance intelligence quotient has remained fairly constant the second half of the decade, ranging from 80–84.
11. An all male class was programed into Homemaking (1970).
12. An Exploratory Activity program was initiated (1970) on a total school basis, five periods per week.
13. The annual student Christmas program was replaced (1960) by less time consuming evening programs for parents.

14. A Modern Dance offering for the older girls was a reality.

15. A full time supervising teacher-in-charge was designated to exert leadership in the daily academic teaching activities.

16. Full time student language arts tutorial instructors and in-service training on an intraschool basis for new teachers to Gallaudet, were two innovations.

17. The Kindergarten classes (we went from one to three Kg. classes) were combined into a two teacher team approach; one teaching station for group learning functions and a second location for individualized student tutoring on an alternating daily schedule.

18. The Advanced Department was programed into a class rotating schedule, permitting teachers to specialize in a defined curriculum area.

19. A new language curriculum guide was adopted. Supplementary curriculum guides were made available to each teacher.

20. Systematic evaluation measures and guidelines were developed in the basic communication skills through six levels of Gallaudet, Primary through the Intermediate Departments.

21. Library volumes were more than quintupled during the decade.

22. A filmstrip library in excess of 1000 was made available and a Filmstrip Guide devised for the individual teacher.

23. The proposal to indoctrinate the Gallaudet faculty and staff in the application of the Visible English (fingerspelling) approach to supplement the pure oral methodology was approved. A project grant for this expressed purpose (Title VI-A, ESEA) has been submitted and approved. This ancillary approach in the total school program will be incorporated, September, 1971.

24. Gallaudet served as a practicum center for the internship of teachers in training from St. Louis University (Speech Pathology) and Harris Teachers College, (Education Professions Development Act). In addition, high school seniors were assigned to Gallaudet to assist teachers and gain exposure to an ongoing program for exceptional children.

25. One-half of the faculty had earned Master's degrees. Certification by the State Department of Education is a requirement for all Gallaudet teachers appointed in subject matter areas. (According to a recent survey on a national basis, the Gallaudet School for the Deaf has the most comprehensive requirements for securing a teaching certificate of all schools surveyed.)

26. The first appointment of a male deaf instructor became a reality.

27. The first Fontbonne College-St. Joseph Institute for the Deaf trained teachers of the deaf were given appointments to the Gallaudet faculty.

28. Renovations and additions were completed in the classrooms and throughout the building facility to enhance various features of school life.

29. The decade saw many of our graduates and former students continue their educations in regular elementary schools, regular secondary schools, the Missouri School for the Deaf and other schools for the hearing impaired, vocational training centers, Gallaudet College, the National Technical Institute for the Deaf, and in exceptional cases, other institutions of higher learning.

DISCUSSION

Among topics discussed by the participants and the audience were the following:

(a) The need for medical personnel to be better informed about deafness, its educational implications and the need for appropriate early referral and diagnosis.

(b) There was conjecture that the day schools tended to be more frequently involved with oral methods than total communication.

(c) There were concerns expressed of the need for basic guidelines concerning the development of day school programs. It was suggested that superintendents of existing programs for the deaf of all types serve as consultants and advisors thus contributing their expertise so that the growing trend towards day school education would be a positive movement.

(d) After some discussion, the feeling was expressed that day schools be encouraged to become more involved in the CAID with increased participation in the Day School Section of each convention rather than to form a separate organization specifically for day school programs. It was felt this would contribute to unity whereas a separate organization might dissipate our strength. Day *and* residential schools, oral *and* manual should work together for the common interests of deaf children.

(e) A brief discussion took place concerning the availability of Title VI funds to public day schools. The paper presented by Dr. Harrington seemed to indicate that the city day schools were not getting federal funds comparable to the Title I funds being received by state-supported schools. There also seem to be more "strings" attached in Title VI procedures.

(f) The special problems of teachers in day school programs were given some attention. It was recognized that the supervision of day programs, especially smaller ones, is often done by supervisory personnel with general educational backgrounds or generalized training in exceptional children rather than specifically with the hearing impaired. Creative solutions to this circumstance are needed.

SUMMARY

The Day School Section of the 45th Convention of American Instructors of the Deaf (1971) ended on a positive note with the group looking towards greater cooperative efforts by day and residential schools in the achievement of an improved educational program for deaf children. Foreseen is a broad spectrum of educational plans and methodologies which will insure quality education and effective communication for all deaf children in the United States.

Post-Secondary Programs

10:30 a.m.–4:00 p.m.: Post-Secondary Programs—Lower School Auditorium; *Chairman:* Robert Lauritsen, Project Coordinator, Technical Vocational Program for Deaf Students, St. Paul Area Technical Vocational Institute; *Recorder:* Patrick W. Duggan, St. Paul Technical-Vocational Institute, St. Paul, Minn.

10:30 a.m.: "*A National Program of Continuing Education for the Deaf,*" Dr. R. Orin Cornett, Vice-President for Planning and Public Service, Gallaudet College, Washington, D.C.; "*Low (Under) Achieving Deaf People—Meeting*

Their Needs in the Seventies," Dr. Larry Stewart, Associate Director, Deafness
Research and Training Center, New York University, New York, N.Y.; "*The
Interpreter—An Integral Person in Integrated Education,*" Patrick W. Duggan,
Counselor, St. Paul Technical Vocational Institute, St. Paul, Minn.
1:30 p.m.–4:00 p.m.: "*Higher Education for Deaf Students—An Integrated Ap-
proach,*" Dr. Thomas A. Mayes, Coordinator, College Services for the Deaf,
San Fernando Valley State College, Northridge, Calif.; "*Utah State Univer-
sity Facilitative Program for the Hard of Hearing: 1968–1971,*" Thomas C.
Clark, Assistant Professor, Department of Communicative Disorders, Utah
State University, Logan, Utah; "*The Regional Post-Secondary Programs:
Delgado Junior College, St. Paul Technical Vocational Institute, and Seattle
Community College*" Dr. Herbert W. Barkuloo, Director, Program for the
Deaf, Seattle Community College, Seattle, Wash.; "*Project Dawn—A Look
to the Future,*" Carl J. Kirchner, Director, Project DAWN, San Fernando
Valley State College, Northridge, Calif.; "*NTID in 1971,*" Dr. James R.
Speegle, Assistant Dean for Support Education, National Technical Institute
for the Deaf, Rochester, N.Y.

A NATIONAL PROGRAM OF CONTINUING EDUCATION FOR THE DEAF[1]

Richard Orin Cornett, Ph. D., Gallaudet College

RATIONALE

Education is probably the closest thing we have to an American faith . . . Not only have we looked upon education as the great social panacea, we have also regarded it as the great ladder for individual improvement.[2]

Today no one seriously questions the need for continuing education. Whereas it was once thought that the knowledge needed for life was absorbed during childhood and youth, the swiftly changing social order is more and more turning the focus of education from children and youth to the concept of continued learning—learning as a life-long process. As a result, adult education—or continuing education—has progressed from privilege, to hobby, to necessity. The world today demands an enlarged purpose for education—"the development of a capacity in each individual to learn, to change, to create a new culture *throughout his life span.*"[3]

Continuing education is a fact of life for the hearing. The ghetto drop-out has his choice of various opportunities for training and education. The high school graduate makes his selection from a veritable smorgasbord of educational offerings. Post high school education opportunities for deaf people, however, are extremely limited. If education as a lifetime process is so essential, there is little justification for the fact that so few opportunities for continuing education are available to the deaf.

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[1] The introductory and concluding sections of this paper are taken from an unpub-
lished paper, "Adult Education for the Deaf—A Rationale," by Mrs. Carol J. Boggs,
Special Assistant to the Vice President, Gallaudet College. The sections which describe
specifically the proposed national program are from the "Study of the Need for a
Continuing Education Program for Deaf Persons," by the DHEW Study Committee, Dr.
Howard Walker, Chairman.
[2] Delmar T. Oviatt, "Greetings from San Fernando Valley State College," in *A Report
on the Conference for Teachers and Interpreters in Adult Education Programs for the
Deaf,* Henry O. Bjorlie, et al, eds., (San Fernando Valley State College, Northridge,
California. March 19, 1966), p. 2.
[3] Malcolm S. Knowles, *Higher Adult Education in the United States,* (Washington:
American Council on Education, 1969), p. 23.

Leaders in the education of the deaf for years have called for continuing education for the deaf. There is a strong sentiment that adult education for the deaf is perhaps more neglected than any other area in the field. The Babbidge report recommended in 1965 that the deaf be given access to the full range of post secondary and adult education available to the general population. In 1967, the National Conference on the Education of the Deaf recommended enhanced opportunities in colleges and universities, junior colleges, technical schools, vocational schools, and adult education programs. And, in 1970, the Committee on the Role and Function of Gallaudet College strongly recommended expansion of continuing education efforts at Gallaudet.

With this background, the College requested $128,000 for a small continuing education program for the local District of Columbia area in the fiscal year 1971. While House-Senate Conferees deleted this item from the 1971 budget, they requested that the Department of Health, Education and Welfare make a thorough study of the need for an adult education program for deaf persons, the level of financing necessary, and the manner in which such a program might be administered. Accordingly, a task force was convened by DHEW and submitted its final report with recommendations in March, 1971. The report recommended that Gallaudet College serve as the focal point for the initiation of a broadly based nationwide program of continuing education for deaf adults. The task force recommended that this effort be made in concert with programs in other institutions with existing and developing programs of continuing education for the deaf. Further, it will provide funding for parts of such programs in other institutions. This concept was strongly endorsed by the recently convened Board of Fellows of the College.

IMPLEMENTATION

It is imperative that continuing education for the deaf become a reality without delay. Delay can only increase the probability that the deaf adult will be an early casualty in today's rapidly changing social and economic environment. Gallaudet College has prepared and submitted a request for a supplemental appropriation in the 1972 fiscal year budget. The sum of $616,000 requested represents the additional amount necessary for the first year of the five-year, five million dollar program recommended by the DHEW task force on adult education. In the course of its development and operation, the program created as a result of the initial funding will develop and offer opportunities such as:

1. Model courses for college credit for the deaf to be offered in evening and weekend programs.
2. Independent study—tutorial sequences for off-campus study.
3. Summer and interim semester opportunities.
4. Educational counselling services.
5. Seminars for parents of the hearing-impaired and for deaf parents of hearing children.
6. Programs designed to prepare the deaf for satisfactory achievement in examination-for-credit programs (high school equivalency).

7. Non-credit sequences for cultural appreciation and participation in the arts and enjoyment of the humanities.

8. Credit and non-credit technological and vocational educational programs.

9. Work study, internship, apprenticeship, and fellowship programs at Gallaudet College and at other institutions of learning elsewhere.

10. Conferences, institutes, and workshops on continuing education for the deaf.

In the course of program development and expansion, educational offerings devised will employ media, instructional technology, and interpreters in the most strategic and sophisticated of educational delivery systems. The objective will be to provide for the deaf adult a variety of learning experiences through independent study, as a member of a small group or class, and as a part of the larger community. The program will include television taped courses, T.V. special services programs and news broadcasts with simultaneous interpretation, and filmed and other materials available for distribution through a variety of outlets to the deaf community.

The program will include also the design of a plan for personnel development and training in cooperation with the other centers in a consortia arrangement. The long-range objective will be to create a pool of trained specialists in continuing education of the deaf and, at the same time, to enhance the quality of its own staff.

A strong component of the continuing education program over the long term will be that of consistent and meaningful research and evaluation. For the first time significant work can be done to validate the methods and materials used with the deaf adult. Research and evaluation in this program might cover such areas as performance of the program, as reflected in comparison results with objectives, quantifiable materials production, student tracking and characteristics analysis, and cost analysis, to mention only a few.

NUMBERS OF PEOPLE AND EDUCATIONAL LEVELS TO BE SERVED

In 1969, 25 million, or slightly less than 20 percent of the adult population in the United States, were engaged in continuing education of some form. There are in the United States approximately 1,400,000 people over the age of 17 with a binaural hearing loss sufficient to be classified as being deaf or severely hard of hearing. Although a similar proportion (approximately 20 percent) of the deaf and hard of hearing population may be regarded as a long range goal, the program as projected over the five-year period envisions reaching only a small fraction of this total population.

Over the first five years the program will be widely available only through mass media. Its effectiveness will be greatest in the urban areas where more than 60 percent of the deaf and hard of hearing (approximately 840,000) people are concentrated. The parts of the plan involving the use of mass media including television newscasts, special television educational features, and filmed materials for wide distribution through organizations and institutions might be expected to reach 30 percent of those in urban areas, or approximately 300,000 people. The mass media features of the program should reach all levels among the deaf and their families with essentially equal effectiveness.

At the end of five years, organized courses and non-credit programs might be expected to reach between 0.5 percent and 1.9 percent of the deaf and hard of hearing population. The staff and resourses envisioned for the program would make it possible, however, to accommodate only between 1,000 and 2,000 deaf persons in formal courses. With sufficient resourses, the program could be expanded to serve as many as 7,000 to 14,000 persons.

Because of the greater availability of materials and methods for the high school and college levels, the program will be directed largely toward these levels in its initial stages. Because more time is required to produce materials and methods that are effective for continuing education of the deaf at the lower levels of academic achievement, e.g. adult basic education and literacy training, participation in formal courses will be somewhat limited in these fields at the start. By the end of the five-year period, participation at the level of adult basic education and social and cultural enrichment should outstrip the enrollment at the higher levels simply because the number of deaf persons needing this level of instruction is numerically greater. (For example, 58.7 percent of the deaf and hard of hearing population have completed less than nine years of schooling.)

Conclusion

Continuing education programs are widely available to the general public. Why cannot deaf adults use what is already available? The deaf adult cannot use most existing adult education offerings for the same reason the deaf child cannot use the services provided the hearing child in the public high school. His social and communicative isolation pursues him throughout all of life. Without unique offerings tailored to his needs or without special provision being made for bridging the communications gap, presenting the deaf adult with the opportunity to enroll in most adult education programs is a meaningless gesture.

The need for continuing education of the deaf is inescapable. The problems are monumental. Obviously, it is an impossible task to provide the deaf adult with all he was denied as a child. The enormity of the job to be done, however, does not relieve one of the responsibility of doing something. The situation might be likened to trying to row upstream in a rushing river — the consequences of doing nothing are far worse than the results of rowing, however difficult that may be.

Gallaudet College has a responsibility to the deaf community beyond its time-honored mission of liberal arts education for deaf youth. That which has been learned in the educational process at the College must be translated into educational programs for the larger deaf community. The commitment to the training of deaf children is highly visible in the preschool program, the Kendall School, and the Model Secondary School for the Deaf. A program of adult education is the logical capstone in a developing program of lifetime learning for the deaf sponsored by Gallaudet College.

LOW (UNDER) ACHIEVING DEAF PEOPLE: MEETING THEIR NEEDS IN THE SEVENTIES

Larry G. Stewart, Ed.D., Deafness Research & Training Center.
School of Education, New York University

My reason for being here is to suggest ways in which we can help to meet the needs of low or under achieving deaf people. I am sure those of you who have worked closely with deaf people know of the problems and needs of this group, but because the term "low or under achieving deaf people" is of recent origin, I will begin by describing some identifying characteristics of these people. I will then discuss their needs briefly. The major portion of this paper, however, will deal with action stategies for meeting the needs of low achieving deaf people.

Let me begin by saying that the term low or under achieving is a semantic convenience. Some of you may prefer terms such as multiply handicapped, severely handicapped, seriously disadvantaged, or other terms. A Steering Committee appointed by SRS in 1970 came to the conclusion that "low (under) achieving" was most appropriate, and I agree. We are here concerned with deaf people who achieve significantly below their potentials in the areas of communication, social functioning, learning, and emotional adjustment. Some are relatively strong in one or more of these areas of functioning, but extremely weak in one or more so that the end result is low achievement in educational and vocational areas. Perhaps you can more clearly grasp the meaning of this statement by recalling the deaf children in your school who could not seem to learn, or who were such behavior problems that they were unable to make progress in their studies. These children drift through school and after leaving because of age or dropping out, they are unable to qualify for Gallaudet, NTID, regional vocational programs, or any other post-secondary educational program. They may get a very low level job, or they may be unemployable. They remain on the fringes of society, both in the so-called hearing world and in the deaf community. Many have multiple disabilities; others have no diagnosed disability other than deafness. They are severely handicapped and consequently they are low achievers. Because most have normal strength, mobility, and intelligence, and yet achieve at a low level, they are under-achievers in the true sense of the word.

This may surprise you, but a large proportion of deaf school leavers each year fit this description of low (under) achievers. The SRS Steering Committee on activities for this group estimated that each year approximately 2,000 deaf school leavers enter the ranks of the under-employed or unemployable and do not qualify for any post-secondary training programs other than those provided through vocational rehabilitation facilities. To support this contention, an unpublished study done in 1969 revealed that of 1,160 deaf students leaving selected schools for the deaf that year, only 40 percent went on to post-secondary training. The remaining 60 percent went directly into employment at the semi- or un-skilled level or were unemployable.

A number of schools for deaf children and youth are actively attempting to develop and expand meaningful programs for low achievers. But, the number of school leavers who are still severely handicapped and cannot qualify for existing post-secondary programs can only lead to the conclusion that enough is not being done to help these children during their school years. The absence of post-secondary programs for them leaves no doubt that we are doing nothing for them at that level.

In the 1970's education and rehabilitation workers with deaf people will need to become involved with developing appropriate programs for low (under) achieving deaf people. Their numbers are increasing at all levels of the age ladder. Our choice is clear—either act now, or face the questions that will be forthcoming from parents, government agencies, and others on why nothing is being done for approximately 50 percent of the deaf population.

STRATEGIES FOR ACTION

There is currently a bill in the U.S. House of Representatives, introduced in March of 1971 by Rep. Wilbur Mills (D), Ark., to provide for the establishment of regional comprehensive rehabilitation centers for low (under) achieving deaf people. If enacted, this bill will make possible free-standing centers offering to low achieving deaf people quality services in the areas of vocational and psychological diagnosis, medical training, recreation and physical education, residential and independent living, and job placement. Research and preparation of personnel to work with low (under) achievers will be made possible through these centers, and each will have an instructional media development component.

It should be pointed out that these regional centers will attempt to be for low achievers what Gallaudet and NTID are for deaf people who achieve at a higher level.

The bill introduced by Rep. Mills is known as H.R. 5610. It needs the support of all of us, so I encourage you to voice your support to your representatives in Washington, D.C.

I am confident that these regional centers will meet the needs of low (under) achieving deaf people at the post-secondary level. However, it is critical that we also be concerned about low achievers and potential low achievers during the elementary and secondary school years. We can prevent many cases of low achievement and increase the level of achievement of others through appropriate educational programs. For this reason schools for the deaf, the Bureau of Education for the Handicapped of the U.S. Office of Education, and appropriate university teacher training programs should all mount efforts to meet the needs of low (under) achieving deaf children and youth. There are weaknesses in our educational system that result in our failure to do more for these children and only a large scale attempt to strengthen educational programs will result in the changes that must be made. Let me list briefly the progress that would reduce the incidence of low achievement in deaf children:

1. More pre-school programs for deaf children;
2. More programs to give parents guidance concerning their deaf children;

3. Stronger residence living programs for deaf children of all ages, including higher training standards for residence hall workers;
4. The use of total communication by teachers, other staff members, and parents, at all age levels;
5. More teachers who associate with deaf adults, and who understand the world the deaf child will enter as an adult;
6. Stronger counseling and guidance programs at all levels;
7. Special diagnostic and instructional programs for deaf children having learning disabilities;
8. More and better instructional media for children with limited communication skills.

As you can see a great deal needs to be done for the low achieving deaf person. However, in rehabilitation we have seen case after case of the deaf person who has been relegated to life as a chronic low achiever by inadequacies in our educational and rehabilitation program for the deaf. We have every reason to seek change when almost 50 percent of deaf youth are seriously underemployed or unemployable.

In 1967, in a speech delivered before a C.E.C. conference held in Chicago, Dr. McCay Vernon commented: "Multiply handicapped deaf children represent the most talked-about, least acted-upon problem in the area of deafness today. Evidence of this are figures indicating that from 15 to 35 percent of deaf youth, most with multiple disabilities, are either not accepted into educational programs for the deaf or else are dropped out at or before 16 years of age."

It has been four years since Dr. Vernon made this statement, but the evidence suggests we have yet to make significant gains in our educational and rehabilitation programs for low achieving deaf people. It is my hope, and I am sure many of you share it, that in the year 1980 we can look back upon the decade of the 1970's as a golden era in the development and implementation of programs for low achieving deaf people of all ages.

THE INTERPRETER—AN INTEGRAL PERSON IN INTEGRATED EDUCATION

Patrick W. Duggan, B.A., M.A.,
St. Paul Technical Vocational Institute

The basic goal of the St. Paul Technical Vocational Institute is to prepare qualified students for entrance into a career. School personnel are servants of that goal—to prepare students for work in technical, business and distributive, trade and industrial, or health service occupations.

The deaf education program is totally involved in all phases of the regular St. Paul TVI program. Every person on the deaf program staff is an important servant to assist qualified deaf students for entrance into and success at a career goal. The means to attaining the career goal of a specific student depends upon a long list of variables which includes:

1. Personal characteristics of the student himself (attitude, aptitude, interest, and abilities acquired from prior educational program)

2. Significant "other" people (parents, other students, teachers, friends, interpreters, secretaries, note-takers, counselors and administrators)
3. Facilities (building, location and training equipment)
4. Employment opportunities (existent realistic job possibilities commensurate with the training program).

Every variable is worthy of study in itself to find the total answer of meeting basic educational needs of students. There is a complex system of combinations that are interdependent on each other to achieve total success. Both the tragedy and the beauty of such a system is the intricacy.

Failure in any part of the system contributes to possible total failure of a career goal for the student. An optimal career choice can be achieved, on the other hand, by the harmonious working of the student himself, other "significant" people, and facilities. Obviously, there are individual degrees of difference in each of the working relationships which will contribute to the overall success or failure of the career choice outcomes. Basically, this means that any programs of career development can only be as good as the weakest person or facility involved in obtaining a career goal.

One of the critical variables in the deaf education program at TVI that will determine an optimal vocational goal for a particular student is the interpreter. In the subgroup of other "significant" people, I would like to focus on the role of the interpreter in a Technical Vocational Training Program as it exists at TVI.

The interpreter is bound in with the action in the age of accountability. The interpreters have a very defined responsibility for assisting the student achieve a career goal at TVI. The TVI interpreter handbook reads: "Your primary responsibility as an Interpreter at TVI is to relate everything the Instructor says to the class. It is preferable that you translate, using the thoughts and words of the Instructor verbatim. In certain situations, you will have to *interpret*, departing from the exact words of the Instructor, by defining and explaining what the Instructor is saying. Interpreting should in no way lessen the Instructor's exact meaning. The student is entitled to "hear" everything being said, and *nothing* is to be deleted by the Interpreter."

There are more than semantics involved here in the words "translating" and "interpreting." However, the essential sentence defining the ultimate responsibility and desired outcome for the interpreter is "The student is entitled to 'hear' everything being said, and nothing is to be deleted by the interpreter."

The manual continues in the second paragraph: "It is desirable that Interpreters have knowledge of areas that they are responsible for, but do not neglect interpreting in order to tutor a student. Tutoring is made available during study time or outside of class time."

This further emphasizes and clarifies the role of the interpreter. There is a need for the interpreter to be flexible, to provide specialized services in any training area, yet recognizing that interpreting is not the same as tutoring. Interpreting is a continuous activity rather than a special interruption of a classroom lecture or shop demonstration for in-depth explanation of materials that students have not completely understood.

Tutoring with proper supervision is done either in the classroom during study time or outside the classroom by many interpreters at TVI who are qualified to tutor after completing interpreting responsibilities. This is reasonable since interpreters at the TVI setting are very responsible for understanding as much of the content of the courses that they interpret for as possible. This, again, is not saying that interpreters have to be knowledgeable in the areas for which they interpret due to the flexibility of class programming. However, we have found that special knowledge of a field in TVI is very helpful in assisting the student to optimal understanding.

Four different examples of interpreters at TVI are presented in a "home movie" that I plan to present to you today. In this movie you will see the variety of duties of four of the ten interpreters in the school. The first interpreter that you will see in the movie has no deaf relatives and is a college graduate. During every quarter in TVI, she has been responsible for 12–18 students in the Graphic Arts Major. The ratio of one interpreter for 12 to 18 students has worked out successfully in this particular program. There are many reasons for this which include:

1. Some students had prior knowledge in the area of Graphic Arts.
2. The interpreter, herself, has been able to quickly pick up the vocabulary and learn the procedures of many of the different duties for people working in Graphic Arts.
3. The interpreter has the cooperation of the teachers for working out lecture and shop schedules.

The 18 deaf students represent 15 percent of the 120 students in the print shop. There is a great need for flexibility on this particular interpreting job. The interpreter provides continuous on-the-spot supportive services for the deaf students in that shop most of the day. The interpreter reports that the quality and quantity of the classroom work for the students demand much personal initiative and responsibility on the student's part. However, the interpreter assists in the development of these traits. She also feels that the course content is similar in degree of difficulty as her own college training although the aim in a technical program is geared for specific marketable skills.

The second interpreter in the movie is a former TVI student who has completed some training in Chemical Technology and at one time served as a Student Interpreter. She has no relatives who are deaf, but has the aptitude for interpreting plus brings her specialized skill to a related area of training that is highly complex. She works as an interpreter in the Medical Laboratory Assistant Program and could work with up to 2–3 students in this particular area. The ratio of student to interpreter is one to one at this time. A number over the 2–3 ratio would probably not be effective due to the complex nature of this class and limitation in the size of hospital work stations for MLA. This interpreter will also follow the student for a six month field-work experience at one of the local hospitals.

The third interpreter that we look at is a high school graduate who has deaf parents. Prior to working at TVI, she originally had experience as a worker in the data processing field. Her responsibilities tend to be more general than in the MLA program. She offers her expertise in areas such as general office training, but can also act as a resource person to explain any special areas for which she may be responsible.

All the interpreters have acquired specific expertise in their work in TVI and are valuable resources for assisting students to explore various majors in TVI. This interpreter also may be called upon to do a variety of duties such as interpreting in Highway Technology or any area where she does not have specific knowledge but has the basic interpreting abilities to be able to translate what the instructor is providing in the way of pertinent information for the student. Other duties may include helping students over the rough spots in job interviews and for the first few days on the job.

In the fourth film, the chief interpreter at TVI is presented. She has deaf parents. Her prior employment before coming into TVI was as a legal secretary. Her expertise in organization, her maturity and dealing with individual instructors and leadership to fellow interpreters marks a few of the activities for which she is responsible. In-service training by use of video tape or drill practice sessions are part of her routine duties. The film also shows her ability to fill in and work in many different areas in the school plus her use of a sense of humor as an important part of the total interpreting job. She has many contacts with instructors and staff during the day and has a wide variety of responsibilities which include late telephone calls to get an extra interpreter, planning with regular instructors in TVI for classroom interpreting needs and for discussing progress of individual students. She also interviews prospective interpreter applicants.

All the interpreters have had some prior work experience or specific training before coming to TVI and we have found this to be helpful in generalizing to the work activity of the program. One half of the interpreters that work at TVI have deaf relatives with over one-third of the total group of interpreters having deaf parents. Obviously deaf parents or relatives are not necessarily a pre-requisite for the job as an interpreter at TVI. A combination of people who have in-depth knowledge of the language of some deaf persons along with people who have the desire, aptitude and interest to interpret compliment each other and make the interpreting staff an informative and knowledgeable group.

The ratio of students to interpreter averaged about one interpreter to four students every hour last quarter. There are variations to this whereby there is one interpreter to 18 students in one area and in another area, one interpreter to one student. However, because of the nature of the job and flexibility demanded of the interpreter, this ratio has to be viewed with caution. Particular interpreter service can often be on an "on call" basis (i.e., Instructor—"I need an interpreter all morning for an industrial tour"). Basically, there is no specific way to anticipate all the plans, lectures and shop activities of the 180 regular staff.

Another consideration of TVI interpreting services is the fatigue factor. In our experience at TVI, we have found that the individual differences may vary regarding fatigue factors. This factor is especially noticeable to interpreters in areas where the interpreter may be unfamiliar with the class content, vocabulary or the prepared curriculum of the instructor. However, in TVI, the interpreter quickly becomes familiar with curriculum and builds up her capability for amount of direct interpreting time. A 45 or 50-minute lecture seems to be about an average amount of time that most interpreters can effectively handle straight interpreting. After that a period of 10 to 15 minutes rest seems to be helpful before starting direct interpreting in another class. However, some of the interpreters feel that they can average two hours of straight interpreting time without necessarily getting fatigued. The finding tends to be toward the interpreter with deaf relatives having longer time spans of effective interpreting. Interpreters who have learned sign language in the last one or two years have a certain number of plateau periods where the fatigue factor takes over. My observations do not have any rigid scientific documentation although any descriptive data is worthwhile until further research is available.

The interpreters in TVI use mouthing simultaneously with signing and fingerspelling. Reverse interpreting is important for total participation in classroom activities by the student.

As pointed out in the segment of film regarding the chief interpreter, supervision of interpreting activities provides the type of direction necessary to assure interpreter capabilities for total service to the student.

The TVI interpreter manual from which I previously quoted is a basic guideline to a minimum set of expectations for the TVI interpreter. In my movie review of the different interpreters at TVI, a great deal of flexibility is needed to be effective on the job. The manual contains common sense guidelines for interpreters in assisting students to attain optimal vocational objectives. One example of the text of the manual includes such things as not assuming roles other than that of the interpreter, "recognizing the students have certain responsibilities for themselves and the students have parents, friends, counselors and instructors who also work with the student besides the interpreter alone." Interpreters are aware that they are part of many significant people who are working as a team to help students get the best possible training.

The manual also includes personal responsibility for leaving classes when interpreters are not needed so as to be available for other classes. Other examples of specific guidelines include:

(a) Use of smocks by the interpreters to provide uniform background.

(b) To prevent drawing undue attention to the self.

(c) Strict avoidance of gossiping about students.

(d) Direction regarding classroom positioning of the interpreter.

(e) Proper mechanics of signing, fingerspelling and mouthing.

An appendix of the Registry of Interpreters for the Deaf Code of Ethics is also attached to the TVI interpreter manual.

In conclusion, the TVI consumer, the student, is the person who directly benefits from access to an interpreter. In response to a research questionnaire regarding the student's felt need for notetakers, interpreters, counselors, tutors, a buddy, or no special needs—98 percent of the students indicated that they wanted interpreters. The consumer has spoken and we feel that TVI has responded by having a flexible and qualified interpreting staff working as part of the whole system to assist qualified students attain personal satisfaction in an optimal career goal.

HIGHER EDUCATION FOR DEAF STUDENTS—AN INTEGRATED APPROACH

Thomas A. Mayes, Ph. D., San Fernando Valley State College, Northridge, Calif.

A story appeared recently in *Time* Magazine exploring the present status of colleges and universities in America. It mentioned, among other surprising facts, that our college population today is greater than the population of Switzerland. Switzerland, according to Rand McNally, has nearly six million people. If you have been in the education business long enough to get a perspective on change, you simply cannot take these figures casually. They seem monstrous, unbelievable.

Another set of statistics, passed on to me by Malcomb Norwood, point out that as recently as 1940 only 40 percent of our high school population stayed in school long enough to graduate, and of those who graduated only 6 percent went on to college and received diplomas. Today roughly 75 percent of all high school students graduate and the percentage of these going on for some sort of postsecondary training goes up to almost 50 percent.

Some people are inclined to view this growing activity in our nation's brain mills as a matter of overproductivity by pointing out that 80 percent of all jobs now available can be performed with no more preparation than is offered by high school programs. It may be more realistic to conclude however that the current shortage of employment for people with college degrees is a temporary one, a spell that will pass, because over the years the demand for training in employment has followed an inclining curve, interrupted by adjustments in the job market and by periods of economic recession.

If you can agree that we are experiencing a healthy growth in higher education, then we can consider ourselves fortunate that education of the deaf has not been hiding behind the door in recent years. The very fact that we have all these people here today to discuss different aspects of postsecondary educational opportunities is evidence of growth and progress. Moreover, in these days of emphasis on individualized and personalized instruction it would seem timely that a variety of educational opportunities should be made possible for the deaf.

One of the upcroppings has been a broadening approach to integrated education—or rather the assimilation of deaf students with those who have normal hearing, making use of existing programs and facilities in established institutions such as community and state colleges, and trade and technical schools. Over 600 deaf students are now attending NTID and the three regional technical schools.

More are in locally operated community and junior colleges in a growing number of communities throughout the country.

This appears to be a healthy trend, although of course the matter of hearing-impaired students attending college with large numbers of hearing students is not new. Steve Quigley was able to gather a total of 992 samples for his 1968 study of deaf persons matriculating in regular institutions of higher education not offering special support services.

What is new, however, is that we are now going into integrated education on a scale sufficiently large enough to do some evaluating. We are beginning to take a close analytical look at the effects, the successes and failures of this approach and from our findings draw up some guidelines for improvement of services and goals.

San Fernando Valley State College at Northridge, California, is one of a number of schools making headway in integrated education for the deaf. A very recent study carried out by Lucille Miller, a member of our staff who is now participating in the Leadership Training Program, attempts to provide some insight into a number of relevant factors, including social and attitudinal aspects as well as academic echievement.

To best understand this survey it would be helpful to first take a look at the college, and to get some idea of its general makeup, programs and institutional personality.

Valley State is a liberal arts college, like Gallaudet, rather than a community junior college or technical school. It is one of 19 in a chain of state supported colleges in California and has an enrollment of around 23,000 students. For all of these there is only one college-owned dormitory. The bulk of the students are commuters who live in the general area of the campus, in the northwest section of Los Angeles. Many live in nearby apartments. Very few, in fact less than one percent, come from out [illegible] state.

Campus life contrasts sharply with that of a generation ago in that there is comparatively little organized social activity. Of the total enrollment of 227,000 in California's state colleges, a full 60 percent are transfers from community or junior colleges. A goodly number of students have parttime jobs. They are generally sophisticated, serious scholars. A "B" average is required for admission, and less than 20 percent of the freshmen go on academic probation after the first semester.

Another notable change in student makeup is that those at Valley State tend to switch their academic majors more frequently than was the pattern in the past, and this results in a longer stint on campus than the usual four years. College administrators view this as a sign of maturing judgement, of moving away from the areas of their parents choosing and of making honest assessments of their own aptitudes, potentials, and interests.

During the past Spring semester there were 52 hearing-impaired students at Valley State. Special services offered to them were classroom interpreting, notetaking, counseling, and a small amount of tutoring. There may be any number from one to seven deaf students in a classroom of 25 or 30. Mrs. Miller selected 31 deaf students for her study, omitting those who were attending on an intermittent part-time basis which precluded their sharing the experiences of full-time students. Among those who responded to the survey were 9 freshmen, 4 sophomores, 8 juniors and seniors and 4 graduate students. All had a bilateral hearing loss in the severe to profound range and all but three were prelingually deaf. Except for seven all had attended another college before enrolling at Valley State. The five major schools at the college—Business Administration and Economics, Engineering, Education, Fine Arts and Professional Studies, and Letters and Science—drew their share of the deaf students. The most popular area was that of the Fine Arts.

Here are some facts drawn from the survey:

1. Proximity to hearing students does not alone strongly change social patterns of students, although the desire is there for increased socialization. This may suggest that more counseling help and organized activity planning are needed.

2. A substantial majority of the students found that Valley State was more difficult academically than they had anticipated. But in spite of this majority—two-thirds, in fact—stated that they were succeeding in meeting the challenge. The remainder expressed the feeling that they were losing self confidence.

3. The majority of students stated that for success in an integrated liberal arts college strong language management and good study habits were the most needed qualifications.

4. Speech and lipreading were felt not to be important to most students to academic achievement, but rather considered socially desirable skills.

5. Roughly two-thirds of the students stated that they relied mostly on the interpreter while attending classroom lectures and discussions. The remainder were divided between watching the instructor and reading the notetakers' notes.

6. Nearly all the students indicated a strong preference for the concept of an integrated college program with support services. A minority stated that they would select a college exclusively for the deaf if they were to start over again. None desired to attend a regular hearing college without support services.

Not covered in Mrs. Miller's report but worth mentioning regardless is the general reaction of the faculty and regular student body to the presence of the hearing-impaired students on campus. By and large the college has been openly receptive. Instructors have leaned over backward to offer extra help outside the classroom. Students have taken a noteworthy interest in the problems of deafness and many inquire about opportunities in teaching the hearing-impaired. Especially exciting has been an integrated drama class in which all students, deaf and hearing use a simultaneous speech-sign delivery. The college administration has been supportive and encouraging.

A number of generalizations can be drawn from Mrs. Miller's survey, and one of them is that we must strengthen our counseling services. We have evidently not done nearly enough in preparing students for occupational goals if a disproportionate number enroll in fine arts courses when there is no apparent demand in the job market for people with an aesthetic bend. This becomes all the more important when we consider the fact that most students receive financial support from the Department of Rehabilitation and from Welfare for their college expenses.

We believe that deaf students like all others should have a chance to succeed as well as a chance to fail, that they should have the opportunity to select their occupational goals, that they should also have the privilege to change their academic majors if they feel their aptitudes warrant a change. However, when we are dealing with public funds in putting young deaf people through college there should be a degree of practicality and goal-orientation in the work they undertake. Quite generally, students will work harder if they have a goal than if they do not. Our survey has revealed a greater student concern for social aspects than in future vocational goals.

Another generalization is that support services, like interpreting, should be provided on an individual prescriptive basis, on a basis of need. Keith Lange, up in Oregon, asked me some time ago if we were, by offering interpreting, notetaking, counseling, and tutoring, developing a sense of dependency rather than independency in our students, and I often feel his question merits careful consideration. Moreover, when it comes to interpreting services, which come to around $57.00 per unit of study, we must be mindful that not all of our deaf students are able to use this support effectively. Many are not sufficiently skilled in manual communication to follow rapid interpretation. A study by Ross Stuckless at NTID which found that of 180 deaf students, 93 said they would select a notetaker over an interpreter if they had a choice of just one of the two, gives some confirmation, although this reaction can be interpreted in a number of ways. For example, a student whose vocabulary is limited and whose handling of syntax is weak, will have trouble in a highly technical lecture.

Another conclusion is that we should build a close working relationship between the colleges serving the deaf and between the colleges and the secondary school programs. Such cooperation is necessary if we are to develop a systematic and meaningful referral procedure, a procedure which will see every prospective student going to the school best suited to his interests and abilities. Cooperation is also necessary if schools for the deaf are to better prepare their graduates for college—mentally and academically. We would like all young deaf people to realize that going to college is a very serious business and a great privilege, that it may be the most worthwhile investment in time and effort they make in their lifetimes.

UTAH STATE UNIVERSITY FACILITATIVE PROGRAM FOR THE HARD OF HEARING: 1968–1971

Thomas C. Clark, M.A., Assistant Professor; Frederick S. Berg, Ph. D., Associate Professor; Rex C. Ivory, M.S., Coordinator, Department of Communicative Disorders Utah State University

The young hard of hearing adult with native potential for college work presents an unusual problem to an institution of higher learning. Characteristically, neither the regular public schools nor the special schools for the deaf provide appropriate and differentiated programming for these less severely hearing impaired individuals. In some instances, the hard of hearing student enrolls in a post-secondary institution designed to meet the needs of "deaf" students. The hard of hearing student referred to or attending post-secondary programs for the deaf tends to be educated as if he cannot hear.

Those hard of hearing students admitted to other colleges or universities, even with low entrance examinations scores, will likely have communication, language, and academic deficiencies that place them at a severe disadvantage in competing for grades with their normal hearing peers. Because the study demands at the college, and particularly the university level, are more rigorous than those in elementary or secondary schooling, they often become discouraged and discontinue their college education. On the other hand, the relatively few hard of hearing students who have been fortunate enough to receive appropriate academic preparation do succeed in regular institutions of higher learning.

Due to the unique needs of the hard of hearing university-bound student, it is apparent that there are certain conditions at institutions of higher learning which inhibit the educational progress of the hard of hearing. The most prevalent conditions include:

1. Lack of expertise for obtaining special evaluative and remedial services.
2. University English requirements are rigid and restrictive.
3. Classrooms tend to lack acoustical treatment and visual media options.
4. University instructors often are unaware of the need to make instructional adjustments to support the learning process of hard of hearing students.
5. Tutorial and notetaking services are not regularly offered.
6. Staff members of the Counseling and Testing Centers are not normally oriented to meet all the needs of the hard of hearing student.
7. Academic advisors are unacquainted with the educational adjustments and needs of the hard of hearing student.

It was these above mentioned conditions which led the Department of Communicative Disorders at U.S.U. to develop a "pilot" study designed to explore the feasibility of helping hard of hearing students achieve success in a post-secondary educational setting. This pilot study was supported by the "Social Rehabilitation Services" of the Federal Government during the 1968-1969 academic year.

The present report describes, in part, the pilot project as well as the development of the Utah State University Facilitative Program for the Hard of Hearing. This program seems particularly critical inasmuch as increasing numbers of hearing impaired students are being guided into higher education. This program has a unique special supportive services feature different from programs for the hearing impaired which have been developed elsewhere. This program focuses upon the needs and characteristics of hard of hearing individuals rather than deaf students. Classroom instruction and other teaching activities rely on the utilization of aural and oral skills rather than upon manual communication methods. Emphasis has been given to providing optimal encoding and decoding for speech communication by encouraging educational adjustments in areas of student performance, instructor behavior, room acoustics, instructional technology, sensory aids, tutorial and notetaking services, and individualized career and personal counseling.

The hypothesis that led to the pilot study was that hard of hearing students receiving this supportive assistance could progress as well academically as hard of hearing students attending Gallaudet College or normal hearing students attending Utah State University, if they have similar academic competencies. The pilot study was entitled "University Habilitation of Young Hard of Hearing Adults."

An underpinning for the present program has been the development of a special curriculum for the professional preparation of educational specialists for the hard of hearing. The term "Educational Audiology" has been identified with this unique university curriculum, and the Bureau of Education for the Handicapped, United States Office of Education, is supporting it as a special project. The present Facilitative Program serves as a testing ground for identifying the types of activities in which an educational audiologist might be engaged to provide supportive services for the hard of hearing student.

The Facilitative Program is currently designed to accommodate up to 30 hard of hearing students. Hard of hearing university-bound students are encouraged to apply for admission into this program.

Figure 1 identifies the process of identification and programming of hard of hearing students who participate in the Facilitative Program for the Hard of Hearing.

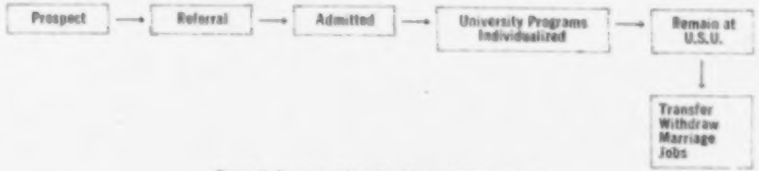


Figure 1. Process of Identification and Programming

Copies of a recruitment brochure are distributed annually and upon request to state rehabilitation, education, and health and welfare agencies throughout the country, high schools in HEW Region VIII, secondary schools and programs for the hearing impaired, universities having speech and hearing centers, and selected professional personnel.

Although an "open door" policy exists at U.S.U. for any student recommended to the Admissions Office, the Department of Communicative Disorders has set up a special admissions procedure to guard against accepting hard of hearing students who have particularly low likelihood of success in post-secondary study at a regular university. These procedures are described in Appendix A.

At the present time, the U.S.U. Speech and Hearing Center houses the Department of Communicative Disorders, including three rooms specifically for the U.S.U. Facilitative Program. The Center also contains other offices: therapy, observation, video equipment, and materials rooms, two audiological suites, (including testing and calibration devices and hearing aids) and research and equipment repair laboratories. Acoustic analysis, amplification, video, spectrographic, operant conditioning, and electro-visual speech devices are included.

Since the program's conception in 1968, we have outlined three basic phases of development for each hard of hearing student: the remedial, facilitative, and independent. Based on evaluative data, an incoming student may fit into any one of these three categories; however, most students accepted to date have entered the remedial program.

REMEDIAL

The objectives of this program are to (a) further evaluate competence for regular university study and to (b) alleviate critical deficiencies of the individual student. For those students with severe English and speech deficiencies, special preparatory coursework in English and speech has been offered through the Department of Communicative Disorders. While in the remedial program, a student's registration during Fall and Winter Quarters is primarily remedial in nature. During the Spring Quarter, the student registers for at least 12 quarter hours of regular university coursework. A typical remedial schedule is outlined below.

Fall:

- Reading and Study Skills
- Remediation in Communicative Disorders (Speech and Language)
- Remedial Methematics—
  - Type I[1]
  - Physical Education[1]

Winter:

- Remediation in Communicative Disorders
- Remedial English (English 0)
- Remedial Algebra
- Use of the Library[1]
- Physical Education[1]

Spring:

- Remediation in Communicative Disorders—
  - English I[1]
  - Math 30 or 34[1]
  - Other regular coursework (Stauden's choice)[1]
  - Physical Education[1]

[1] University courses giving regular credit.

A 2.0 (C) or better honor point average in 12 or more hours of university coursework qualifies the remedial student for regular facilitative student status. A remedial student has the benefit of special assistance, educational adjustment evaluation, personal counseling, career guidance as needed, and tutorial and notetaking services.

FACILITATIVE

Upon successful completion of the remedial year, a student then enters the facilitative phase. During this period of time he receives the same program services as a remedial student. Also, during the first two years of the facilitative phase, he is encouraged to complete the university core of required courses; however, the student is free to choose his coursework based on his individual interests.

INDEPENDENT

Our experience indicates that the longer the student remains in the facilitative phase of the program the more independent of direct program support he becomes. Therefore, if the departmental staff, coordinator, and student decide that the student is academically, emotionally, and socially mature enough to become independent from the program, he will enter the independent phase but will continue to benefit from typical Speech and Hearing Center services and from professors becoming alerted to the special needs of the hard of hearing because of the impact of the Facilitative Program. However, an independent student in need of tutoring will be responsible for securing his tutors, but payment for the tutorial services will be handled by the program in the event monies for tutoring services are to be received from a vocational rehabilitation authorization voucher.

Basic to the program are the tutors and notetakers. The tutors currently employed are typically advanced students in a given area of study or qualified graduates seeking part-time work. A few of the more advanced hard of hearing students have also served as tutors as their time, schedules, and expertise permit. Tutoring sessions are conducted on a one-to-one relationship, and basically a tutor's responsibility is to assist the hard of hearing student to understand, clarify, and explain what is missed in the class lecture and assigned reading. In addition, tutorial assistance is given in preparing written reports, class assignments, term papers, and in quizzing the hard of hearing student's comprehension of the subject and textbook material. Notetakers are hired to take class lecture notes. However, in some instances the tutor will act as the notetaker, thus assisting the tutor in understanding what the professor expects rather than relying on the tutor's memory and past experience with that particular class and subject. When the notetaker is not the tutor, the class notes are made available to the tutor and the hard of hearing student since the notes are taken on regular notebook paper with carbons inserted.

A total of 46 young hearing impaired adults have participated in the U.S.U. Facilitative Program for the Hard of Hearing during the 1968-1969, 1969-1970, and 1970-1971 academic years. Appendix B includes pertinent information on each of the 46 hearing impaired students between 1968 and 1971.

To date, we have demonstrated that a post-secondary program for hard of hearing college students is a feasible and beneficial program. However, from the mass of accumulated data on these 46 hard of hearing students, it is evident that only one-third or 15 of these students were academically prepared for an oral post-secondary program at a regular institution of higher learning. The overall 2.4 grade point average of all the students offers evidence of the beneficial effect of the facilitative support provided by this program. Furthermore, the information also provides supportive evidence that the rationale for the establishment and special supportive programming for hard of hearing university students should be different from the special programs for the deaf. It is felt that a great many more hearing impaired individuals would qualify for and succeed in post-secondary study programs if facilitative programming at home and at school were available.

Fourteen components or variables have been identified as being critical to the success of the U.S.U. Facilitative Program. These are:

1. Availability on campus of an administrative unity with expertise in both clinical and educational audiology.
2. Interagency cooperative effort in the identification and recruitment of students.
3. Financial subsidization for the broad array of supportive services required for the maintenance of a facilitative program.
4. Central administrative commitment to programs for the disadvantaged.

5. General faculty orientation to the characteristics and needs of the hard of hearing.

6. Special admissions procedures.

7. Comprehensive evaluative services.

8. Differentiated educational programming including remedial and regular course sequences.

9. Special focus on remediation of English, reading, speech, and speech perception deficiencies.

10. Classroom and instructional adjustments to offset speech communication problems of the hard of hearing.

11. Tutoring and notetaking services to compensate for what hard of hearing students miss during lectures.

12. Strategies to encourage students to utilize facilitative support as well as to take individual initiative in acquiring help as needed.

13. Personal counseling.

14. Career guidance services beyond ordinary faculty advisement.

Recommendations emerging from this program with young hard of hearing adults include the following:

1. The Bureau of Education for the Handicapped, United States Office of Education, should make available to qualifying universities grant awards for the professional preparation of educational specialists for the hard of hearing.

2. The Social and Rehabilitation Service and/or the Program for Disadvantaged Students in College should provide grant support for the establishment of post-secondary supportive services for the hard of hearing.

3. The Social and Rehabilitation Service should provide research and demonstration grant support for further development and clarification of the model program for the hard of hearing.

4. To offset non-resident and special support fees, the United States government should subsidize the education of hearing impaired students attending post-secondary institutions having facilitative programs.

5. Local rehabilitation agencies should take greater responsibility for identification, evaluation, referral, financial support of hard of hearing persons desiring post-secondary opportunities.

APPENDIX A.—PROCEDURES FOR ADMISSION

1. The prospective hard of hearing student writes the Coordinator, Utah State University Facilitative Program for the Hard of Hearing, requesting an admission packet and provides the name and address of a local rehabilitation specialist who will assist in gathering special admissions data and who will evaluate whether or not local financial sources can cover costs not borne by the university.

2. The Coordinator sends the special admissions packet of instructions to the rehabilitation specialist who coordinates the obtaining of needed data on the prospective hard of hearing student. This includes results of the General Aptitude Test Battery, the Stanford Achievement Test (12th grade norms), an audiological test battery, a written composition, a transcript of high school grades and also college grades, where applicable, and a letter or recommendation from a school official. Characteristically, a prospective hard of hearing student should be utilizing residual hearing for receptive communication and have at least a tenth grade academic competency. Where data are obtained in the locality of the applicant, it is to be forwarded from the rehabilitation specialist to the Coordinator for evaluation.

3. After a decision is made with the assistance of a special departmental committee at U.S.U., the Coordinator notifies the applicant of acceptance or not

to the Facilitative Program. If accepted, the applicant then must make formal application to U.S.U. The Coordinator then assists the applicant by forwarding the necessary information for making formal application to U.S.U. and notifies the Admissions Office of findings and recommendations. Formal admission to U.S.U. requires completion of an admission form including information from a medical examination, transcripts of high school and previous college courses and grades, and results of the American College Testing (ACT) examination.

Presently, the Coordinator for the Facilitative Program designs a financial aids package for each hard of hearing student. Ordinarily, total resident costs per quarter are $1061 and non-resident costs $1231. Of this total cost factor, $500 is required for the special services component of the Facilitative Program. Half of this $500 covers expenses for the Coordinator's salary, secretarial help, special course sections, communications, and maintenance. The other half is designated for tutor and notetaking services. This analysis is based upon participation by 25-30 hard of hearing students.

At present, a combination of sources are utilized to cover financial costs. The family of the hard of hearing student provides what support the local rehabilitation agency determines feasible. To date, local rehabilitation offices have contributed substantially to the Facilitative Program. Also, the U.S.U. Development Fund for Hard of Hearing Students administered by the U.S.U. President's offices, serves as a vehicle for contributions earmarked for this special program.

APPENDIX B—PERTINENT DATA ON EACH OF 46 HEARING IMPAIRED STUDENTS ATTENDING U.S.U. BETWEEN 1968–1971

Student	Grade point average*	U.S.U. credits	dB loss	Wears hearing aid	U.S.U. program adjustment	Previous year activity	Activity as of September 1971
1	3.2	100	93	Yes	Excellent	Regular college	U.S.U. attendance.
2	3.4	95	105	Yes	do	Gallaudet College	Do.
3	2.7	88	97	Yes	do	Regular college	Do.
4	2.5	87	110	No	Good	Cafe work	Do.
5	1.9	65	40	Yes	Fair	2-year clergy call	Do.
7	2.2	64	98	Yes	Good	Gallaudet College	Do.
8	3.3	58	102	Yes	do	Regular college	Do.
9	2.9	56	97	Yes	do	Technical training	Do.
10	3.4	56	13	Yes	Excellent	Regular college	Do.
11	1.5	39	39	Yes	Fair	do	Do.
12	2.7	36	36	No	Excellent	Work	Do.
13	3.6	33	33	Yes	do	do	Do.
14	2.3	28	28	Yes	Fair	High school	Do.
15	1.3	14	60	Yes	do	Regular college	Do.
16	2.8	8	72	Yes	Good	do	Do.
17	3.1	34	58	Yes	Excellent	do	Do.
18	2.9	26	58	Yes	Good	High school	Do.
19	2.5	36	67	Yes	do	School for deaf	Married, working.
20	2.0	75	55	Yes	Fair	High school	Do.
21	2.9	50	100	Yes	Good	Other university	Married.
22	2.5	33	75	Yes	Fair	Regular college	Other university.
23	3.2	35	100	Yes	Good	High school	Working.
24	2.4	23	62	Yes	Excellent	do	Junior college.
25	1.5	31	63	Yes	Poor	Regular college	Regular college.
26	2.1	31	65	Yes	do	School for deaf	Married, working.
27	1.0	3	105	No	do	High school	Regular college.
28	2.3	58	110+	No	Fair	do	Do.
29	2.1	22	75	Yes	do	School for deaf	Gallaudet College.
30	1.2	21	107	Yes	do	High school	Do.
31	2.8	24	100	Yes	do	do	Technical college.
32	2.1	31	68	Yes	do	School for deaf	Do.
33	2.1	31	78	Yes	do	do	Do.
34	1.9	15	77	Yes	do	High school	Do.
35	2.3	38	62	Yes	Good	School for deaf	Unemployed.
36	2.0	8	83	Yes	Poor	do	Married, working.
37	1.7	39	65	Yes	Fair	High school	Working.
38	1.8	26	95	Yes	do	School for deaf	2-year clergy call.
39	3.0	9	85	Yes	do	do	Married.
40	1.3	12	43	No	Poor	High school	Married, working.
41	1.2	22	50	No	do	do	Do.
42	1.4	11	69	Yes	do	do	Married.
43	2.1	18	85	Yes	do	do	Unemployed, ill.
44	2.0	26	67	No	do	Cleaner work	Cleaner work.
45	1.7	35	103	Yes	do	High school	Working.
46	Audit	Audit	90	Yes	Fair	Unemployed	Do.
Mean	2.2	25	79				

THE REGIONAL POST-SECONDARY PROGRAMS: DELGADO JUNIOR COLLEGE, ST. PAUL TECHNICAL VOCATIONAL INSTITUTE AND SEATTLE COMMUNITY COLLEGE

H. W. Barkuloo, Ph. D., Director, Program for the Deaf,
Seattle Community College

The three regional post-secondary educational programs for deaf students are an outgrowth of the desire of governmental officials and educators of the deaf to provide post-secondary educational opportunities for deaf students who are not qualified to enter Gallaudet College or National Technical Institute for the Deaf. Spearheaded by people such as Dr. Boyce Williams, Dr. Deno Reed, James Garrett, and Dr. William Craig, the University of Pittsburgh was given the task of locating three junior college or vocational-technical facilities who would take on the task of providing this service for deaf people. Site visits by Health, Education, and Welfare and University of Pittsburgh personnel determined Delgado Junior College, St. Paul Technical Vocational Institute, and Seattle Community College would meet the desired criteria. Accordingly, under five-year grants funded equally by the Office of Education and the Social and Rehabilitation Service, the doors of Delgado were opened to deaf students in September of 1968, with St. Paul and Seattle following in September of 1969. Delgado, then, is beginning its fourth year and St. Paul and Seattle are beginning their third year.

The purposes of the three programs are basically twofold: First to demonstrate that deaf students, with appropriate support services, can succeed in the various vocational-technical programs offered by the Regional Centers; and second, to provide research data which will determine guidelines for the establishment of other regional programs. The University of Pittsburgh serves as the research center for the three programs.

The basic format of the three programs is similar in that each has a preparatory program into which a great majority of the students enter and that each offers essentially the same support services: interpreting, tutoring, notetaking, and counseling—both vocational and personal.

The preparatory programs, while having some differences in course titles, tend to be similar. The primary purpose of the preparatory programs in the three schools is to provide the student with the experiences and information which will allow him to make a realistic and satisfying vocational-technical decision. The second purpose is to provide the student with the academic skills, particularly in mathematics and vocabulary, which will assist him in successfully completing the vocational-technical program which he enters. A third purpose is to supply the student with information which will assist him in successfully accommodating himself to the economic and social world in which he will live after completing his program of studies.

It has been stated that the great majority of the entering students enroll in the preparatory program. The three regional schools have found, as has NTID, that these students have very little information on which to base a career decision. The preparatory program, therefore, is critical to the deaf student and is, in effect, a time saving device in that it helps to prevent a series of uninformed, unsatisfactory career decisions. The preparatory period also serves as a time when the student can make a personal adjustment to a new and probably less restrictive life situation.

The next section of this discussion will deal with data concerning the students, their areas of career decision and employment. The data given are as of January, 1971. At that date, Delgado was at the mid-point of operation (two and one-half years) and St. Paul and Seattle had been in operation one and one-half years.

Three hundred and thirty-four hearing impaired students had enrolled at three schools as of January, 1971—115 at Delgado, 112 at St. Paul, and 107 at Seattle. Two hundred seventeen of these students were enrolled at the time that the data were gathered. Forty-one students had successfully completed programs—18 at St. Paul, 15 at Seattle, and 8 at Delgado. Sixteen students transferred to other college programs—2 from Seattle (Gallaudet), 13 from Delgado (Gallaudet, Lee College, St. Paul) and one from St. Paul. Sixty students dropped from the programs—Delgado 33, St. Paul 14, Seattle 13. It is important to note that the great majority of the students who dropped from the programs did so because of personal and social immaturity rather than because of academic deficiencies. Of the 41 who had completed programs, 39 were employed.

Reading levels, as measured by standardized achievement tests, indicate that the students enrolled are reading at around fourth- and fifth-grade reading levels. Many students have been successfully integrated into the programs with second- and third-grade reading levels and the average reading levels have been somewhat inflated because many dropouts from the four-year programs have been accepted into the regional programs.

The students as a group are above average in terms of innate ability. Data available indicate the intelligence, as measured by a standardized performance scale test, is nearly one standard deviation above the norm.

Two of the schools administer mathematics diagnostic tests (Seattle and St. Paul). These tests are non-verbal and include only basic arithmetic skills. Of the students taking this basic skills test, only 15 percent received a score of 60 percent and 5 percent received a score of 70 percent or higher. Given the innate intellectual ability of these students it would seem that some thought should be given to the strategies employed in teaching computational skills.

Delgado and St. Paul house out-of-town students in private apartments and homes near the educational facility. Seattle houses out-of-town students in dormitories at Seattle University, a private college near Seattle Community College. At the end of the first year, the Seattle program encourages students to move into local apartment housing in order to enable the deaf student to take another step toward independent living. One of the major counseling concerns of all of the programs is providing guidance to deaf students in terms of appropriate behavior within a living environment controlled by the moves of a hearing society.

One criteria for measuring the success of the programs is the number of training programs into which deaf students have been integrated. The following is a listing of these programs for the three schools:

Welding	D.P. programing	Drycleaning	Mechanical drafting.
Diesel mechanics	D.P. operations	Machine tool operator	Architectural drafting.
Carpentry	Keypunch	Cake decorating	Custom apparel and fashion design.
Baking	Auto-body mechanic	Horology and microprecision instrumentation.	
Sheet metal	Aerospace engineer	Petroleum engineering	Accounting.
Cosmetology	Horticulture	Medical laboratory assistant	Diesel and heavy duty mechanic.
Electronics	Culinary arts	Inhalation therapy assistant	
Power sewing	Commercial arts	Chemical technology	Painting and decorating.
Graphic arts	Orthotics and prosthetics.	Animal technology	
General business		Traffic transportation	Plumbing.
Secretarial science	Air conditioning	Design technology	

In conclusion, it can be said that at this point the three regional schools are meeting the goals that have been set for them. They are demonstrating that deaf students with relatively low levels of academic achievement can be successfully integrated into on-going vocational-technical programs and that these people can be employed upon completion of their training. The final measure of the success of this venture will not be known for several years as it truly hinges not upon immediate employability but upon the ability of the deaf person to retain employment and to make the skill adjustments necessary as his job requirements change due to technological change.

PROJECT DAWN—A LOOK TO THE FUTURE

Carl J. Kirchner, B.A., M.A., Director-Project DAWN,
Coordinator-Secondary Teacher Preparation Program,
Area of the Deaf, San Fernando Valley State College,
Northridge, Calif.

DAWN

D reaming of spreading are we, the Dawn People
E ducation to deaf adults, broadening their horizons
A nd instilling in each one a desire, too
F or an enriching journey through life for a "new day" has dawned.

A light that we need to make ourselves whole
D oes come through more and more learning
U ntil the day of such revelation comes
L et us not sit back but go forth
T o inspire the people in the world of silence.

W ith adult education comes high self-esteem,
I ncreased also, self-confidence and a better image
T his with deeper understanding put together
H elps to tear down all barriers—high or low.

N ever should the deaf be a separate part of the world
E xcluding ourselves will not break down barriers with the world,
E very one of us Dawn participants has a duty to do and by
D oing so shall we bring to countless lives the dawning of a new day!

This poem was written by three participants of Project DAWN: Nancy Rarus—Hartford, Connecticut; Emil Ladner—Berkeley, California; and Patrick Fitzpatrick—Skokie, Illinois.

"Education is a seamless coat of learning." It is a coat that continues to be in style for it's worn all through life and is not a coat that the wearer outgrows and leaves behind him when he leaves school at age 16, 20 or 24.

In almost every community across the nation, hearing persons are able to upgrade their education through Adult Basic Education Courses. In many cases the courses are not solely academic in orientation but can be creative and skill building as well.

Thousands of hearing persons avail themselves of this opportunity each year and oftentimes work to complete a high school diploma. Others enroll in Adult Basic Education Classes merely to broaden their horizons with no specific goal in mind.

It is a rare sight to find a hearing impaired person ever attending one of these classes. Yet they are tax paying citizens and should have equal opportunity to take advantage of such offerings. We know of the results of the studies done by Dr. McCay Vernon, Birch and Stuckless and others regarding the overall achievement of hearing impaired students terminating their education. Why is this fact so?

1. Hearing impaired students often times do not know that there are programs available to them after they leave school. It is our fault as educators of the hearing impaired that we do not inform and encourage students to continue their schooling in their community. Too many of us, including myself, are guilty of often saying, "You better learn now because when you leave here—it's finished." What kind of mental attitude are we establishing in the young hearing impaired adult?

2. Supporting services such as interpreting services and note-takers are not readily available to make it easier for a student to truly participate in classes.

3. Often the classes that are established for the hearing impaired create the "old school" setting and do not develop a motivational atmosphere.

4. Funds are often not available for any one specific group and taking advantage of what the hearing person has available is shunned and feared by many hearing impaired persons.

5. Hearing people do not know the needs of the deaf and therefore do not plan for them.

6. The hearing impaired population has not spoken up for what it needs and wants and therefore has gone unnoticed.

DESIGN

Project DAWN—*Deaf Adults With Need*—is designed to:

1. Work with Adult Basic Education leaders in establishing programs applicable, attractive, and useful to the deaf community.

2. Motivate and help the deaf adult to take full advantage of these programs.

It is open to hearing impaired persons only. These individuals must show leadership qualities as well as an interest in promoting and encouraging Adult Basic Education among the hearing impaired community.

The end result of training hearing impaired persons is to have a hearing impaired paraprofessional person in each state as the link between State, City and County personnel in Adult Basic Education and the hearing impaired community.

Thus the training is only open to one hearing impaired individual from each state with ~~the states~~ states that have a large hearing impaired population having two or more persons in the program.

PREPARATION

The program covers a four week period of intensive work in the following areas:

1. Community Leadership—A course in leadership development.
2. Philosophy, Organization and Administration of Adult Education Programs.
3. Visitations to various kinds and types of Adult Basic Education Programs.
4. Lecture series regarding various aspects and problems of deafness, organization of programs and leadership.

During the four weeks, the participants developed insights regarding the hearing impaired person's needs, and the role he must play in developing the educational destinies of these hearing impaired persons. They also learned that education need not take place in a ghetto of deafness but that the hearing impaired with proper supporting services could take advantage of the post secondary opportunities that are available in almost every community in the form of Adult Basic Education.

PARTICIPANTS

The participants come from all walks of life. A high school diploma or its equivalent is the only academic requirement. Out of the 24 in the 1970 program only 9 were college graduates. Ten had some college or post secondary work. The important factor is that these people are leaders and are vitally interested in the welfare of their own.

Seventeen states were represented in Project DAWN-1970. Project DAWN-1971 hopefully will have representatives from the remaining 33 states and the 4 American Territories.

PROGRAM DEVELOPMENT

Four regional follow up workshops were held in Wichita, San Francisco, Chicago and New York City approximately seven months after the participants returned to their home states. These meetings were held to assess what had been accomplished, what still needs to be accomplished and what obstacles have been noted. Persons from Adult Education Programs, educators of the hearing impaired, vocational rehabilitation counselors and the hearing impaired themselves come to these meetings for an exchange of ideas, information and a chance to rap.

The following is a list of items found to be common to all the meetings around the nation:

Regarding the hearing impaired

1. Motivation must be developed since they lack self motivation and are apathetic.

2. Adult Basic Education must be sold to them. It must begin early in the residential schools and day classes in order to set the proper attitude toward continuing education.

3. Leadership and initiative must come from the grass roots level. It cannot be forced upon them by those outside the community.

4. They should accept responsibility for the total welfare of other hearing impaired individuals.

Regarding the job of the hearing impaired paraprofessional—It must include ways to:

1. Identify the needs of the hearing impaired community and the type of population to be served.

2. Build self-esteem in each hearing impaired person.

3. Teach the hearing impaired to recognize their own needs.

4. Encourage others to accept each hearing impaired person at the level he is on and not lament over what should or could have been if only. . . .

5. Encourage integration of the hearing and hearing impaired in the Adult Basic Education Setting where possible. By so doing, the hearing impaired person can take advantage of a much broader and perhaps a more interesting program than would otherwise be available.

6. Establish any special programs away from the school or classes for the deaf. Involvement of "new teachers" (not teachers of the deaf) and new methods of instruction is necessary so that the hearing impaired person does not feel that he is getting the same educational diet of earlier years.

7. Present the hearing impaired person with a goal, or goals, to work toward such as a high school diploma, better job opportunity, and not just school for the sake of school.

8. Develop an interpreting pool so that interpreters will be available for the hearing impaired.

9. Develop and encourage parent/young hearing impaired adult classes-enrollment where the parent can also take the class as an example that learning continues through life.

10. Work with school districts to provide salaries and proper classification for interpreters.

11. Develop closer ties and a working relationship with many community agencies. This will make a wide variety of services available to the hearing impaired.

12. Work with the school districts concerning funding so that the hearing impaired benefit. Local education monies might be sought for special classes and services such as interpreting, note taking and special materials and equipment.

GOALS

Project DAWN hopes to accomplish the following objectives by:

1. Providing each state with at least one hearing impaired paraprofessional person who is interested in establishing, fostering and developing Adult Basic Education Programs for the hearing impaired in his state.

2. Providing each state with a liaison person who can act as the spokesman for and to the hearing impaired community.

3. Providing leadership in the hearing impaired communities so that the hearing impaired can have an active and important part in the educational goals and achievements of their own.

4. Laying the foundation for regional workshops in the following two years to help encourage and motivate the hearing impaired to pursue a program of continuing education.

DAWN is the beginning of a new era. It is one of countless opportunities for the hearing impaired. But most of all it is the era of involvement by the hearing impaired themselves. They are at last ready to speak out their needs, fight their own battles and strive to help themselves. Helping themselves through educational opportunities seized, means growth in dignity, maturation and self-esteem. These qualities put the hearing impaired on an equal footing with his hearing brothers. This was best stated by Cervantes in *Don Quixote*. "When God sends the dawn, He sends it for all."

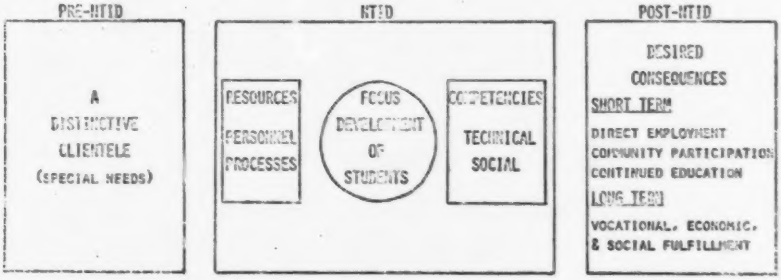
N.T.I.D. IN 1971

James R. Speegle, Ph. D., Assistant Dean for Support Education,
National Technical Institute for the Deaf

It gives me great pleasure to speak with you today about the National Technical Institute for the Deaf. I would like to approach the topic, "NTID: 1971" not so much from what we predict for the future, but more what we have derived from the past few months. Specifically, I will be describing the activities from the point of view of the last academic quarter and those which will carry over into the next academic year.

First, let me begin by showing you a model that we find helpful in describing the mission of NTID. This model will provide the framework for my discussion with you (Slide 1). The first section indicates that there is a specific clientele for which NTID was designed. This clientele has been defined by the Department of Health, Education, and Welfare in conjunction with NTID officials. I will make a list of the admission criteria available to you at the end of the meeting. I am happy to report that 86 new students began their Summer Vestibule Program yesterday (Slide 2). A summary of this group

SLIDE 1



SLIDE 2

ADMISSION INFORMATION

1. Applications Received 277

2. Action

   a) Admitted and enrolled. 89

   b) Admitted, Waiting List 30

   c) Admitted, Withdrawn. 31

   d) Referred 85

   e) Applications in Progress 42

3. Geographic Distribution of 84 Summer Programs Students

1.	California	4	13.	New Jersey	4
2.	Connecticut	4	24.	New York	20
3.	Delaware	1	15.	Ohio	9
4.	Florida	1	16.	Pennsylvania	6
5.	Georgia	1	17.	Texas	1
6.	Hawaii	2	18.	Tennessee	1
7.	Illinois	7	19.	Utah	1
8.	Kentucky	1	20.	Vermont	2
9.	Maryland	1	21.	Washington	1
10.	Massachusetts	5	22.	Wisconsin	2
11.	Missouri	8	23.	W.Virginia	1
				Total	84

4. Males - 48; Females - 36.

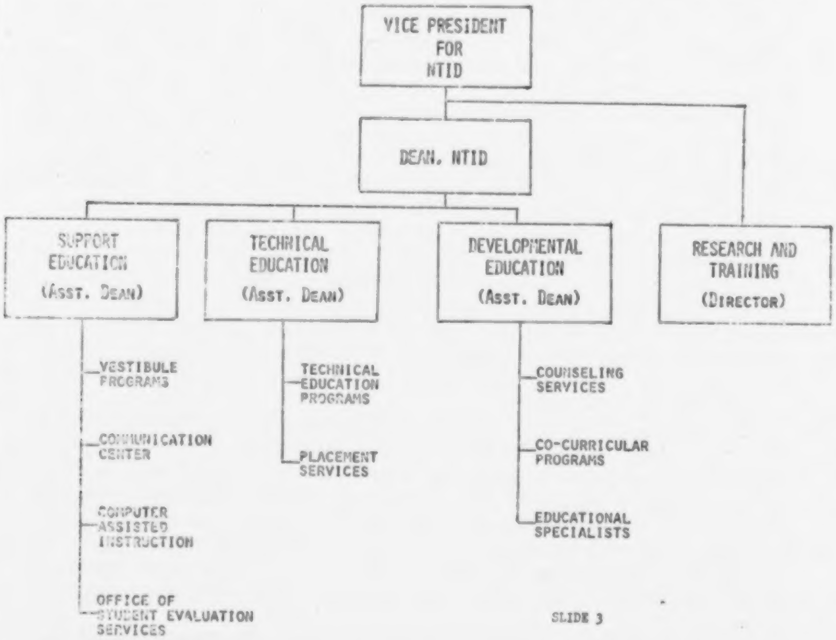
5. Last Secondary School attended:

   Residential 39

   Day Programs. 45

of students is as follows: as can be seen, all of the students who were qualified for admission could not be given the opportunity to enroll and were placed on a waiting list. This is due primarily to our interim development phase and the fact that we have very real space limitations. I am pleased to report that construction of the NTID buildings will be underway next month and the expected completion date is January, 1974. After completion we will be able to serve the intended number of students—750. In the interim our capacity will remain at approximately 330 students going up slightly as space permits.

How are the resources and personnel organized to focus on student needs and to carry out the educational mission of NTID? The next projection will give you a general overview of the structure of NTID (Slide 3). In the Division of Support Education, the Vestibule Programs serve the remedial and preparatory needs of the deaf students as they enter NTID. During the last quarter there were 74 full time students in Vestibule. Vestibule courses also serve as the General Education component of the Technical Education Programs at the Certificate and Diploma levels.


VICE PRESIDENT FOR NTID
DEAN, NTID
SUPPORT EDUCATION (ASST. DEAN)
TECHNICAL EDUCATION (ASST. DEAN)
DEVELOPMENTAL EDUCATION (ASST. DEAN)
RESEARCH AND TRAINING (DIRECTOR)
VESTIBULE PROGRAMS
COMMUNICATION CENTER
COMPUTER ASSISTED INSTRUCTION
OFFICE OF STUDENT EVALUATION SERVICES
TECHNICAL EDUCATION PROGRAMS
PLACEMENT SERVICES
COUNSELING SERVICES
CO-CURRICULAR PROGRAMS
EDUCATIONAL SPECIALISTS

SLIDE 3

Next year our total math program will be taught on an individualized modular programmed basis using a math lab as the central learning area. This will mean that students will be assigned modules of work based on their individual abilities and future program needs.

No formal classes will be held although expectations for each student will be established and written on an individual contract basis. It is expected that this mode of learning will serve as a model for other Vestibule Program areas. Feedback on the success of these programs will be gained by student performance in the technical programs of RIT. This feedback will help us modify the various modules and validate this approach to learning.

Computer Assisted Instruction plays an important support role in NTID. A complete Mathematics Diagnostic System has been developed which prepares students for entry into college level calculus. Units are now under development in Vestibule Physics and Chemistry. A program for teaching manual communication to staff and students is being developed and will be ready for use this summer. Other units being developed for use on the computer are: circuit analysis, chemical conversion, and civil technology. These units can be used as independent study units, remedial and review units, or as integral parts of the classroom activities.

The Communication Center is concerned with the total communication needs of the students and consists of speech and hearing services, audiological services, and interpreting services. Some of the projects that are underway include: (1) an assessment of the communication needs in industry to determine the nature of the communication skills in specific job environments; (2) an evaluation of the communication profile which assesses student's receptive and expressive communication skills; (3) a student speech committee has been formed to evaluate current courses and involve students in curriculum improvement; (4) a study to define the role of an interpreter in an academic environment. Students are required to take a basic course in the speech department entitled "Introduction to Speech and Hearing." After this course, a student and his Communication Counselor work out a program based on that individual student's needs. Courses the students may take are: "Language of Idioms and Slang," "Technical Vocabulary," "Practical Uses of Speech," "Language of Signs," and "Individual Therapy."

The Office of Student Planning and Evaluation is a new area within NTID. It is headed by Mr. William Darnell and includes services such as Admissions, the Summer Vestibule Program, Program Sampling, program selection and planning, student staffings, program monitoring, financial aid, and liaison with vocational rehabilitation agencies across the country. It has been found that program planning and goal orientation on the part of students are important aspects of academic success. This office will concern itself with these problem areas.

The Technical Education Division is concerned primarily with two areas: technical curricula and placement. The technical curricula consists of four departments: Engineering Technologies; Visual Communications; Technical Science; Business Technologies. During the last quarter there were 139 students in these programs and as shown in Slide 4 they distributed themselves in the following manner.

SLIDE 4

TECHNICAL EDUCATION PROGRAMS

BUSINESS TECHNOLOGIES	48
ENGINEERING TECHNOLOGIES	41
TECHNICAL SCIENCE	14
VISUAL COMMUNICATION	36

At this time 30 plus programs in these four areas have been approved. These programs are modular and a student may exit at a certificate, diploma, or associate degree level. The exit level of each student will be defined on the basis of his abilities, aptitudes, interests, and achievement level. The dimensions will be continually evaluated to determine if program changes should be made.

Placement activities are concerned with both cooperative job placement and direct employment upon graduation. This summer 31 students are receiving co-op job experience. The cooperative job experience is seen as an integral part of the student's educational progress. It is through this experience that strengths and weaknesses can be determined and future academic plans made to insure technical competency upon graduation. We have learned some general principles from our placement activities to date and I would like to briefly detail them for you. First, it is clear that efforts must be directed towards developing and maintaining liaison with industry, business, government, employment agencies, organized labor, and various other groups in an attempt to inform prospective employers of the programs offered at NTID and the skills which deaf students possess. Secondly, follow-up studies relating to the adjustment and advancement of the deaf student must be conducted in order to understand the implications for the admission process and curriculum development. Third, each student arrives at the placement office with a different set of needs, skills, and expectations; therefore, generalizing is impossible. Each placement must be selective from the point of view of the student and the employer. I'm sure it is not hard for you to understand the problems, frustrations, efforts, and rewards of a placement operation. Finally, it will be the student himself who must pave the way to final employment. If the student is unprepared or unskilled the task will be considerably more difficult.

Developmental Education includes the Educational Specialists, Personal Counseling, and Social and Cultural Development. The Educational Specialists are responsible for providing the support services for the 103 deaf students in the colleges of RIT other than NTID. Tutoring and academic advising are important support services for deaf students in all colleges. An idea of the magnitude of the support provided is shown by the number of hours spent in these activities during the Spring Quarter (Slide 5).

SLIDE 5

SUPPORT SERVICES
SPRING QUARTER, 1971
(10 WEEKS)

PROGRAMS	ACADEMIC ADVISING	TUTORING
VESTIBULE	322 HOURS	435 HOURS
TECHNICAL EDUCATION	495 HOURS	385 HOURS
CROSS-REGISTERED PROGRAMS	755 HOURS	1,092 HOURS
TOTALS:	1,572 HOURS	1,912 HOURS

Each student at NTID is assigned a Personal Counselor. Approximately 1100 hours of counseling were provided for NTID students during the last quarter. The counseling dealt with the behaviors and concerns typical of any group of bright, young, inexperienced students. Most common among the problems faced by NTID students were: lack of career goals; inability to choose a major area of study;

lack of motivation for academic achievement. These three problems are the basic reasons for students leaving NTID prior to completing a specific program of studies.

The Department of Social and Cultural Development is responsible for the co-curricular activities of students. Many faculty and staff are involved in these activities in order to closely relate the academic and social aspects of a student's environment. Some of the projects in this department include: development of a student information center in the dormitories which includes school newspapers, catalogs of other post-secondary programs for the deaf and audio-visual study aids; volunteer work projects in the Rochester community; legal forums and programs on sex and drugs; assistance in the production of a special captioned show at the Planetarium in Rochester.

The Division of Research and Training is active in providing answers to the questions of how to best serve the needs of deaf students in a college environment. One project that has recently been completed and will be used this summer for the first time is a Student Profile System. This computer-based system provides comparative data on an individual student and students in the various colleges of RIT on several variables: interest; aptitude; achievement and communication skills. This profile develops a measure of best fit between the students and the program and will be a powerful guidance tool to assist in accurate placement of students. In addition the feasibility of computer managed psychological testing is being investigated. The longitudinal study of all NTID students is continuing and from time to time descriptive data will be made available. Researchers are also looking at attitudinal changes among deaf students as they relate to the college environment and their hearing peers.

The Training personnel are involved in the internship program which is intended to contribute to the preparation of professional personnel to serve the deaf in various roles. They also manage voluntary classes for hearing students in manual communication. Last quarter approximately 50 students enrolled in this course. Training personnel are also responsible for the Student Interpreter Program which trains about 15–20 hearing students each summer to the interpreters. Incidentally, many of the students in the program have decided to go onto graduate training in deaf education. We feel that these students with a technical background and a high interest in deaf education will be a valuable asset to the field at large.

Finally, to go back to the model of NTID's mission (Slide 1) it is expected that the students who leave NTID will be socially and technically competent. We have attempted to define what these terms mean and thus clarify our future directions (Slides 6 and 7).

SLIDE 6

TECHNICAL COMPETENCE

HOULD BE DEFINED AS:

- ABILITY TO PERFORM JOB TASKS
- ABILITY TO DEAL WITH THINGS AND IDEAS

SHOULD INCLUDE:

- RECEPTIVE AND EXPRESSIVE USE OF THE TECHNICAL LANGUAGE OF THE JOB TASKS
- KNOWLEDGE OF ANY SUBJECT MATTERS (EG., MATHEMATICS OR SCIENCE) RELATED TO THE JOB TASKS
- ABILITY TO ANALYZE TECHNICAL PROBLEMS RELATED TO THE JOB TASKS AND TO SELECT FROM ALTERNATIVE SOLUTIONS
- KNOWLEDGE OF AND ABILITY TO DRAW UPON RESOURCES IMPORTANT TO THE JOB TASKS
- ABILITY TO ACCOMPLISH JOB TASKS INDEPENDENTLY, EFFICIENTLY, AND EFFECTIVELY
- KNOWLEDGE OF HOW TO REMAIN ABREAST OF CURRENT DEVELOPMENTS RELATED TO THE JOB TASKS

SLIDE 7

SOCIAL COMPETENCE

SHOULD BE DEFINED AS:

- ABILITY TO ASSUME RESPONSIBILITY FOR ONESELF AND OTHERS
- ABILITY TO INTERRELATE WITH PEOPLE

SHOULD INCLUDE:

- ABILITY TO RELATE TO AND COMMUNICATE WITH OTHER PEOPLE, BOTH DEAF AND HEARING, BOTH WITH INDIVIDUALS AND WITH GROUPS
- ABILITY TO CHOOSE WISELY FROM AMONG CONSEQUENCES OF ALTERNATIVE PERSONAL BEHAVIORS (eg., RIGIDITY *versus* FLEXIBILITY; ABSENTEEISM *versus* PROMPT AND FAITHFUL ATTENDANCE)
- ABILITY TO ADAPT TO CHANGING WORK AND SOCIAL ENVIRONMENTS
- ABILITY TO PARTICIPATE SUCCESSFULLY IN COMMUNITY LIVING
- ABILITY TO DISCUSS THE SOCIAL ISSUES OF THE DAY

In each case we are attempting to define strategies which will assist each student in reaching his maximum potential.

WEDNESDAY, JUNE 30, 1971

Fourth General Session

8:30 a.m.–10:15 a.m.: Dr. Armin G. Turechek, president-elect, presiding, Parnell Hall Auditorium.

8:30 a.m.–9:00 a.m.: "*Annual Survey of Hearing Impaired Children and Youth*," Augustine Gentile, Director, and Peter Ries, Office of Demographic Studies, Gallaudet College; "*The Achievement Testing Program Conducted by the Annual Survey of Hearing Impaired Children and Youth*," S. DiFrancesca, Office of Demographic Studies, Gallaudet College.

9:00 a.m.–9:30 a.m.—"*An Experiment in Education*," Dr. Doin Hicks, Dean, Pre-College Programs, Gallaudet College, Director, Model Secondary School for the Deaf.

9:30 a.m.–10:15 a.m.—"*Resourceteria and More*," Dr. Ben Schowe, Ohio School for the Deaf, President, School Librarians for the Deaf and Associates; Dr. Raymond Wyman, Director, Northeast Regional Media Center for the Deaf.

THE ANNUAL SURVEY OF HEARING IMPAIRED CHILDREN AND YOUTH

Augustine Gentile and Peter Ries, Office of Demographic Studies, Gallaudet College

The Annual Survey was formally established in May, 1968 and is conducted by the Office of Demographic Studies of Gallaudet College. The operational feasibility and methodologies of the program were determined during two preceding years of pilot and developmental work in a five state area. The Division of Research, Bureau of Education for the Handicapped, Office of Education, Department of Health, Education and Welfare, initiated the Annual Survey and provides most of the funding. It took root, however, from the efforts of many organizations and individuals in the field who saw a need for a central and permanent organization for the collection of statistics on deafness.

Basic Goals

The Annual Survey of Hearing Impaired Children and Youth is a permanent program established to collect, process, and disseminate data on hearing impaired children and youth from birth through college age. The primary interest of this national program is in those kinds of data that can serve to improve and expand the educational opportunities available to hearing impaired individuals. The program encourages the use of its data by administrators, researchers, and other professionals providing services to the hearing impaired, as well as by any individual or group devoted to improving the results of special education for hearing impaired people.

Policies

While permanent and national in scope, the Annual Survey does not aim at replacing or absorbing the work of other programs at the state or local level devoted to the collection and dissemination of information on hearing impaired children and youth. Rather, it seeks to facilitate their work through cooperation whenever this is feasible. Nor does the Annual Survey view itself as the center for all types of research in this field. It focuses its activities on collecting and disseminating limited kinds of information on selected topics. It seeks to make available to outside researchers the vast amount of data it possesses and any special services it is feasible to render to them.

The only standing restriction in this regard is that no data will be released which permits the identification of a hearing impaired individual or of a specific educational program cooperating with the Annual Survey. Independent researchers using the data of the Annual Survey have access only to summary statistics or coded information concealing the identity of an individual or a program.

The major portion of the resources of the program is devoted to information on hearing impaired children and youth who are receiving special educational services related to their impairment. The determination of the size and the location of that group of hearing impaired individuals who are not receiving special educational services, as well as evidence on the proportion of those that would benefit from such services, is an important task. However, until the demand for information on this second group increases, and it becomes likely that such information will be needed by those who intend to improve the opportunities for this group, the Annual Survey will continue to focus its activities on those receiving special educational services, and the types and amounts of services available to them.

Since the Annual Survey attempts to promote the use of its data by those whose judgments and decisions will have a direct or indirect bearing on the education of hearing impaired individuals, it recognizes its responsibility to devote a part of its resources to the evaluation of the quality of the data it collects and disseminates. This is particularly important because it seeks to establish national norms on the basic characteristics of hearing impaired children and youth that may be used by teachers, administrators and researchers. Thus, in its dissemination of information, the Annual Survey makes every effort to properly qualify its data and indicate any limitation associated with it.

The Annual Survey seeks to avoid associating itself with any "side" or established position relating to controversial issues within the field of educating hearing impaired individuals. Thus, it does not interpret its own data. Rather, it seeks to facilitate the use of its data by reputable individuals or organizations that may themselves wish to draw policy implications or test research hypotheses that are related to these issues.

In its attempt to provide useful information to those interested in hearing impaired children and youth, the Annual Survey has the benefit of the guidance and advice of its National Advisory Committee. Among its members are hearing and deaf individuals, administrators, researchers, teachers, and specialists from other areas within the field of hearing impairment. Also, aside from these direct contacts the staff members of the Annual Survey have with people in the field, periodic formal surveys of the cooperating educational programs that submit data are conducted to aid in determining the kinds of information needed in the field.

The Annual Survey devotes part of its resources to developing the methodologies and instruments for best collecting data on a continuing basis for a national population of hearing impaired children and youth. The methodologies and instruments are of two basic kinds: (1) Those associated with basic demographic variables that are collected on the total student population each year, and (2) those relating to the performance of the student in various areas, or to topics of special interest in a given year which may be collected on a sample basis. However, information is not sought on a sample basis when this would prevent the Annual Survey from supplying individual educational programs with needed data on all of their students.

The standardization and improvement of information maintained on hearing impaired students by educational programs will facilitate research and help to meet administrative needs. The Annual Survey actively encourages this objective and devotes a part of its resources to this end.

The major source of guidance in defining the goals of the Annual Survey, and of specifying the policies which will lead toward the realization of these goals, derives from the National Advisory Committee. Every attempt is made to maintain a wide diversity of interests and competencies, as well as geographic representation, among its members. On questions of a technical nature, consultants from specialized fields are utilized as special needs arise.

PAST AND CURRENT ACTIVITIES

1968–69 school year data collection

During the first year of the program, data collection activities were directed towards all schools for the deaf and a representative sample (15 percent) of all special classes. In addition, records on students who were receiving itinerant services were obtained in total from two states and in part from several states. In all 25,363 individual records were collected. This represents nearly 80 percent of the total enrollment of all institutions invited to participate.

Also, during the first year an academic achievement testing program was conducted. Over 12,000 Stanford Achievement Tests were administered. The Annual Survey supplied testing materials and scoring services free of charge to participating programs. Achievement test scores for hearing impaired students based on the results of that testing program were published and distributed in the Fall of 1969. In addition, each participating school received distribution of achievement test scores based on the performance of their own students. Specific information regarding methodologies and content of the achievement testing program can be found in the publication by the Annual Survey entitled *Academic Achievement Test Performance of Hearing Impaired Students: United States, Spring 1969.*

1969–70 school year data collection

Last year the Annual Survey extended its coverage. Efforts were made to reach students in all of the special classes for the hearing impaired, as well as in all of the schools. Data were obtained on 35,285 students from 435 reporting sources. Several publications are now being prepared from these data. They will include:

Marginal summaries presented for a number of variables in order to give overview of data.

Detailed history of hearing loss, variables to include age at onset of loss, age loss discovered, probable cause of loss, sibling hearing loss and parental hearing loss.

Preschool children, only concerned with students six years of age and under variables to include parent training, age at onset, types of program, age started education.

Detailed audiological information, variables to include standard used, place examined, profession of examiner, SAT and SRT results. May also examine degree of reporting for the complete audiological.

Additional Characteristics, to provide cross tabulations of the variables age started formal education prior to age six, type of first educational program, age at onset and age loss discovered.

Additional characteristics, cross tabulations between the variables additional handicapping conditions, type of educational program and age started education.

These publications are expected to appear during the Summer and Fall of this year.

1970–71 school year data collections

The forms for the 1970-71 school year are now being received and processed in the office. Approximately 600 reporting sources with about 42,000 students enrolled in their programs are cooperating with the Annual Survey this year. This represents an increase of 197 new participating educational programs with almost 8,000 students. At the same time, about 98 percent of those programs that participated last year have been retained in this year's Survey. Of the almost 800 programs invited to participate in Year III's data collection, 77 percent responded affirmatively. These 800 programs have an estimated enrollment of 48,000 hearing impaired children.

An Achievement Testing Program is again being conducted this year by the Annual Survey. Approximately 305 sources including roughly 22,000 students are involved in this program. The procedures being followed in the current program were heavily influenced by the results of the Achievement Testing Program conducted by the Annual Survey during the 1968-69 school year. This influence is especially reflected in three areas of this year's program: (1) Students were given a screening test to determine the most approximate battery they should receive. (2) The schools were supplied with practice materials for their students. (3) In cooperation with Harcourt Brace & Jovanovich, the test publishers, special variations in the standard tests were developed where hearing impairment introduced special problems or unfair disadvantages to hearing impaired students.

The fact that a reliability study will be conducted on this year's program further distinguishes it from the 1968-69 program. Eight schools and 185 students will be involved in this test-retest reliability study. In conjunction with this work, the question of the validity of these tests will also be considered. This will be approached in two ways: first, teachers will be asked to predict student performance; second, internal analysis of the items will be conducted.

Three publications based on the results of this testing program are planned for later this year.

FUTURE PLANS

During the first three years of the program, the Annual Survey devoted most of its resources to gathering basic demographic information on hearing impaired students, and to extending its coverage of these students to its current level of 42,000. It is now in the process of formulating future plans, with the intention of beginning to collect information on selected topics of special interest to those in the field.

Within a few months, the Annual Survey will begin a survey of all the states. Among the types of information that will be sought are: (1) description of services available to hearing impaired children and youth, (2) types of screening programs now in existence, (3) the referral system for those found to have a hearing loss, (4) the number of students receiving special services, (5) the type of legislation relating to hearing impaired students, etc.

At a recent meeting of the Technical Sub-Committee of the National Advisory Committee of the Annual Survey, the following topics were suggested for future special studies:

(1) A study of the visual acuity and perception of the hearing impaired student.

(2) Special study of the multiply handicapped student.

(3) The educational outcome of the hearing impaired student.

(4) Communication skills of the students.

(5) A study of genetic factors in hearing impairment.

(6) The amount and quality of supportive services.

(7) Study of student after-school and summer time activities.

(8) Socio-economic background of parents of hearing impaired students.

(9) A study of highly successful hearing impaired students.

Developmental work on at least one of these topics will begin this year.

Meanwhile, the Annual Survey will continue its efforts to produce an achievement test appropriate for hearing impaired students. Also being considered is the feasibility of developing measures of student performance in other areas besides academic achievement. Finally, efforts will continue to further increase the number of hearing impaired students included in the program.

THE ACHIEVEMENT TESTING PROGRAM CONDUCTED BY THE ANNUAL SURVEY OF HEARING IMPAIRED CHILDREN AND YOUTH: INTERPRETATION AND USES OF THE TEST SCORES

S. DiFrancesca, Office of Demographic Studies, Gallaudet College

Purpose of the Achievement Testing Program

During the 1971 spring semester, the Annual Survey conducted a nationwide academic achievement testing program of students attending special educational programs for the deaf and hearing impaired. Approximately 20,000 students were administered the Stanford Achievement Test. Three-hundred and twenty six schools participated in the testing program. The Annual Survey provided all materials and scoring services with no charge.

There were two basic reasons for this national testing program. First, the schools and teachers obtained measures of the academic progress of their students along with summary tabulations for their individual classes and schools. Equally important to the Annual Survey is that the analyses of the data from the national level testing program will be used in the validation and standardization of an academic achievement test for students attending special programs for the hearing impaired.

This report will give some background on the work of the Annual Survey in the area of achievement testing. You may have seen some of our earlier progress reports and know that in the spring of 1969 we administered 12,000 achievement tests.[1] The program of 1971 incorporated some modifications of the achievement testing procedures and the test materials themselves. The establishment of these new testing procedures stemmed from the analyses of data from the 1969 testing program, and from the suggestions and ideas of teachers themselves.

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[1] Academic Achievement Test Performance of Hearing Impaired Students: United States: Spring 1969; and Item Analysis of Academic Achievement Tests, Hearing Impaired Students, United States: Spring 1969.

THE NEED FOR ESTABLISHING STANDARDIZED PROCEDURES AND VALIDATING AN ACHIEVEMENT TEST FOR HEARING IMPAIRED STUDENTS

As the Stanford Achievement Test was designed for use with hearing students, some serious technical problems arise when it is administered to hearing impaired students in special educational programs. These technical problems stem from two sources. First, teachers of the hearing impaired throughout the country have made special adaptions in presenting the Stanford test questions and directions. Student scores are easily affected by the way in which the test is administered. Standardized testing procedures were lacking and had to be established in order that test scores would be comparable from teacher to teacher and school to school.

Secondly, tests present potentially serious problems in validity and reliability when they are used with any population other than those for which they were designed. Being constructed for hearing students, the Stanford Test content may not always follow what is taught in our special educational programs. Nor do we know if the structure or the design of the test is adequate for these students. For example, the language level of some test questions may be too cumbersome, and sub-tests which are dictated could become a test of the students' receptive communication skill. The Annual Survey is conducting smaller scale technical studies into the suitability of the Stanford Test for hearing impaired students and is committed to providing or developing a test that will be reliable and valid for our students.

The testing procedures and modifications that we have developed thus far appear to have improved the quality of the achievement testing results obtained. Until the results of this spring's program are fully analyzed, however, we will not know how valid and reliable the test results are. A series of publications presenting national level results of the testing program and the analyses of the data are scheduled to begin in the Fall of 1971.

THE ESTABLISHMENT OF STANDARDIZED TESTING PROCEDURES

Screening testing or pre-testing of students

The analyses of our earlier testing data indicated that many subtests were not showing differences between good and poor students. This occurred because the test level they received was too difficult for them. Thus, the number of items they were able to get correct was too few to differentiate ability levels. The validity of the test is substantially lowered when this occurs. Since no guidelines existed for selecting the test battery levels for our students, the criteria for battery selection varied among different schools and teachers. To standardize battery selection procedures and make it accurate, the

Annual Survey implemented a screening testing program. A brief screening test was given to every student. The full battery level he received was then determined from his screening test score.

Practice testing to teach the students test taking procedures

You may have noticed that directions to some parts of the Stanford Test and the design of some types of the questions are difficult for our students to understand. From our data analyses we learned that in a great many cases, students really didn't understand the format of the test questions or how to mark their answers. The seriousness of this problem led the Annual Survey to develop sets of Practice Tests. These Practice Tests included samples of the question types appearing on the Stanford Test. They reproduced question and answer marking procedures. Each student was given a Practice Test first. These were used to teach the student the mechanics and strategies of test taking to prepare him for the real test. As teachers gave the practice sessions, they themselves became better prepared to administer the Stanford Tests. This was a very important secondary benefit of the practice testing program.

Special printing of the test booklets

The Primary test levels—those within the range of the beginning of Grade 1 to the beginning of Grade 4—have many dictated subtests. A student's response to a dictated question may well be a function of receptive communication skill and not his knowledge of the answer. Previously schools attempted various means to overcome this problem—overheads, blackboards and the like. To standardize presentation of the dictated sub-tests and make their design more appropriate, the Annual Survey arranged with the test authors and publisher for a special edition. This applied to the Primary I and II levels only and is called Form W-HI. In this test modification, the dictated questions are also printed in the test booklet. The teacher dictates a question and then allows the student to read it in his own book before marking his answer. Test validity has been improved with these conditions, but we do not know at present the extent to which this special printing has overcome the basic problem.

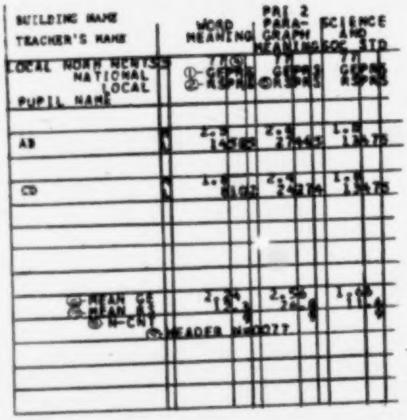
SOME QUALIFICATIONS AND LIMITATIONS OF THE TESTING DATA

You must again keep in mind that the Stanford Achievement Tests were not developed for use in special educational programs for the hearing impaired and their suitability for these programs is not fully known. Do not compare the performance of hearing impaired students to hearing students on the basis of the scores obtained. You may use scores of individual students as relative indexes meaningful only in comparison to other hearing impaired students who took the same test. The class average and median scores for each sub-test are perhaps your most meaningful results. Further analyses of data from the 20,000 tests must be performed in addition to studies of the test reliability and validity before the Annual Survey can determine the statistical confidence limits of your test scores.

INTERPRETING AND USING THE TEST RESULTS

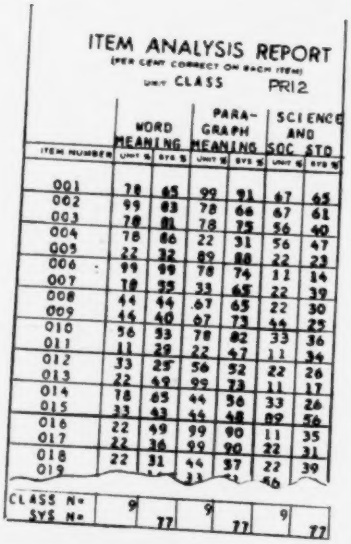
The next section will present sample representations of the actual achievement testing print-outs received by the teachers and schools in the testing program. Its purpose is to demonstrate how to interpret and use the testing results.

SAMPLE OF
THE STUDENT LIST REPORT PRINT-OUT


BUILDING NAME
TEACHER'S NAME
WORD MEANING
PRI 2
PARAGRAPH MEANING
SCIENCE AND SOC STD
LOCAL NORM NCNTS
NATIONAL
LOCAL
PUPIL NAME
AB
CD
MEAN GE
MEAN RS
N-CNT
HEADER N

1. GE	Grade Equivalent Score. The GE should be used only as a relative index to compare students who took the same test. It is a measure of student strength or weakness in a subject area. In interpreting GE scores, keep in mind that a difference of getting one or two more test items correct could significantly affect a student's GE score.
2. RS	Raw Score: This is the number of test items (questions) answered correctly.
3. LOCAL NORM N-CNTS:	The total number of students taking the sub-test in the particular school or building. If the Local Norm N-CNT is smaller than 25, the Percentile Rank and Stanine scores for the student should not be interpreted or used. In these cases use only the student's Grade Equivalent Score.
4. PR	Percentile Rank: This indicates the percentage of students on the print-out who fell at or below the corresponding GE score. Percentile Ranks will not appear on List Reports for the Intermediate or Advanced batteries.
5. S	Stanine: A step on a scale with values from one to nine. Higher scores get higher stanines. General classification of stanine ranks are: S=1, 2, 3 - below average; S=4, 5, 6 - average range; S=7, 8, 9 - above average range. Stanine scores may also be used for comparing performances on sub-tests. Stanines will not appear on List Reports for the Intermediate or Advanced Batteries.
6. MEAN GE	The average Grade Equivalent Score of all the pupils whose scores appear on the print-out. The number of students it is based on is shown by the N-CNT, not by the Header N.
7. MEAN RS	The average raw score, or number of test questions, the group of students got correct on the sub-test.
8. N-CNT	N-Count: Represents the number of students tested who are included on the List Report. If the school requested to have test results grouped by classes, the N-Count will give the number of students in the class.
9. HEADER N	This may vary from the N-CNT. If so it will always be a larger number. It represents the total number of students who took that test battery level in your school or building, whereas the N-CNT number represents the class or unit size.

SAMPLE OF THE
ITEM ANALYSIS REPORT PRINT-OUT



ITEM ANALYSIS REPORT
(PER CENT CORRECT ON EACH ITEM)
UNIT CLASS PRI2

	WORD MEANING		PARA-GRAPH MEANING		SCIENCE AND SOC STD	
ITEM NUMBER	UNIT %	SYS %	UNIT %	SYS %	UNIT %	SYS %
001	78	65	99	91	67	65
002	99	83	78	66	67	61
003	78	81	78	75	56	40
004	78	86	22	31	56	47
005	22	32	89	88	22	23
006	99	99	78	74	11	14
007	78	55	33	65	22	39
008	44	44	67	65	22	30
009	44	40	67	73	44	25
010	56	53	78	82	33	36
011	11	29	22	47	11	34
012	33	25	56	52	22	26
013	22	49	99	73	11	17
014	78	65	44	56	33	26
015	33	43	44	48	89	56
016	22	49	99	90	11	35
017	22	36	99	90	22	31
018	22	31	44	57	22	39
019			33		56	
CLASS N=	9		9		9	
SYS N=		77		77		77

The Item Analysis value is expressed as a percent score. It represents the percent of students who answered each test question correctly. The percent is based on the number of students who answered one or more questions in the sub-test.

UNIT % Unit Percentages will appear only for those schools who requested that their results be analyzed by classroom units. It reflects the percent of students in a particular class, or student grouping unit, who answered the item correctly. For example, on question number 16 on Word Meaning, 22% of the students in the particular class answered this question correctly while for the school or building as a whole, 49% of the students got the question correct.

SYS % System Percent: These are the percentage figures for the total school or building. It gives the percent of students in the total school or building who answered each question correctly.

Uses of the Item Analysis Data: The percent of students answering the item correctly gives information on the difficulty of the item for the class or school. This may indicate strong and weak areas in the instructional program and could lead to better understanding of class performance on single items or groups of items in a specific subject area. To use the item analysis data properly, teachers must determine if the academic subject area measured by the test item is taught in the school curriculum.

SAMPLE OF THE
BUILDING DISTRIBUTIONS AND CUMULATIVE PERCENTAGES PRINT-OUT

GE INTERVAL ①		WORD MEANING ②③ F	WORD MEANING CP	PRI 2 PARA-GRAPH MEANING F	PRI 2 PARA-GRAPH MEANING CP	SCIENCE AND SOC STD F	SCIENCE AND SOC STD CP
5.0- 5.3							
4.6- 4.9				1	99		
4.2- 4.5							
3.8- 4.1						2	99
3.4- 3.7		2	99	2	99		
3.0- 3.3		3	97	17	[illegible]	2	97
2.6- 2.9		23	94	[illegible]	74	[illegible]	[illegible]
2.2- 2.5		15	64	[illegible]	[illegible]	[illegible]	79
1.8- 2.1		31	44	13	17	15	62
1.4- 1.7		3	4			23	[illegible]
1.0- 1.3						10	13
Q3-PERCENTILE 75	④	2.70		2.97		2.65	
Q2-PERCENTILE 50		2.27		2.68		1.89	
Q1-PERCENTILE 25		1.95		2.30		1.51	
⑤MEAN		2.34		2.67		1.95	
⑥STD DEV		.45		.47		.60	
⑦ HDRN=0077 N-CNT	⑧	77		77		77	

1. GE Interval	Grade Equivalent Intervals
2. F	Frequency: The number of students whose scores fell in the range of the GE Interval.
3. CP	Cumulative Percentage: The percent of students receiving a test score equal to, or lower than, the top score in the GE Interval. For example, in this table, the GE Interval of 2.2 - 2.5 on the Word Meaning sub-test has a corresponding Cumulative Percentage of 64. This indicates that 64% of the students obtained a GE of 2.5 or lower and that 36% of the students obtained GEs of 2.6 or better.
4. Q_3 Percentile 75 Q_2 Percentile 50 Q_1 Percentile 25	(QUARTILES) Q_3 Q_2 and Q_1 are three points that separate the students into groups of equal size. Q_3 Percentile 75 - sets off the top fourth (25%) of students. Q_2 Percentile 50 - is the median score. This score separates the group in halves. Half of the students scored above and half scored below this score. The Q_1 Percentile 25 - sets off the lowest 25% of the group.
5. MEAN	The average. The average score for the school or building. The averages are based on the number of students shown by the N-CNT.
6. STD DEV	Standard Deviation: This gives an indication of how close all the student scores are to the average score for the group. The STD DEV is small when all the scores cluster around the average score. For example, the means (averages) of two sub-tests may be the same but for one sub-test the standard deviation is proportionately low. Here, student performance was relatively the same or homogeneous. The other sub-test may have a high STD DEV indicating a lot of variation among student scores, with some very high and some very low scores. This would indicate that the range of ability within the class was greater on the sub-test.
7. HDRN	Header N: This represents the total number of students taking the particular test battery level for the school or building. It is the number of test booklets submitted for scoring.
8. N-CNT	N-Count: This represents the number of students in the school or building who took each sub-test. The N-Counts may vary among sub-tests if some students did not take all the sub-tests.

AN EXPERIMENT IN EDUCATION[1]

Doin Hicks, Ed. D., Director, Dean of Pre-College Programs,
Gallaudet College

Credits:
Script: Sue Ellis, Public Information Office.
Storyboard and Narration: Guy Watson, Ed. D., Director, Instructional Systems and Media.
Photography: Bill Fitz-Patrick, Staff Photographer.
Art: Dave Holman, Staff Artist.
Audio Production: Terry Naylor, Media Technician.

One of the boldest and most exciting experiments in the history of education of the deaf is underway at the Model Secondary School for the Deaf (MSSD) on the Gallaudet College campus.

Here, 80 students and a staff of 73 have come together in a school with no classes, in classrooms with no walls, to seek new ways in which today's young deaf students may be educated toward more productive and meaningful lives.

In a study made by the Department of Health, Education, and Welfare, significant inadequacies and gaps in the educational services for the deaf were revealed, pointing to the distressing fact that few genuine secondary school programs for deaf persons exist in the United States.

Because of the serious communication problem involved, only a few deaf children attending day and residential schools can communicate well enough to enter hearing schools and compete with hearing children. This situation, coupled with a generally weak educational background, results in the fact that only eight percent of any age group of deaf students is now admitted to college, as compared to 54 percent of the general population.

To work toward solving this problem, Congress in 1966 passed Public Law 89-694. This law provided for the establishment and funding of a school to be known as the Model Secondary School for the Deaf, which would be both a laboratory for research and development, and a "real world" high school with all the problems and challenges confronting a typical American high school of the 70's.

Located in Washington, D.C., on the Gallaudet College campus, the MSSD provides day and residential facilities for deaf youths of high school age. The goals of the school are to prepare these students for colleges, other advanced study and, for some, terminal education. The demonstrated success of the MSSD as a model for experimentation and innovation will, hopefully, stimulate the development of similarly excellent programs throughout the Nation.

The MSSD draws its student population from the District of Columbia and five area states—Maryland, Virginia, West Virginia, Pennsylvania, and Delaware. The students range in age from 14 to 19 years.

To be eligible for admission to the MSSD, a student must have completed or be near completion of an eighth grade education or the equivalent; demonstrate a reading level of third grade or higher on a standardized test; be 14 years of age or older; be free of major handicaps, except hearing loss; and have an average hearing loss of 70 decibels or more in the better ear.

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[1] A 35mm slide/audio tape presentation on the Model Secondary School for the Deaf.

The MSSD operates within the corporate structure of Gallaudet College, but determines its own objectives and curriculum, subject to the authority of the Board of Directors of the College.

To advise the President of the College and the chief administrative officer of the school on matters relating to developing and operating the MSSD, the Gallaudet Board of Directors appointed an Advisory Committee of professional educators of both the deaf and hearing, persons in special education, program specialists, and media experts.

Chief administrative officer of the MSSD is the Director, who reports to the President of the College. The National Advisory Committee on Education of the Deaf, in the Department of Health, Education, and Welfare, acts in an advisory capacity in formulating and implementing the basic policies governing the establishment and operation of the school.

MSSD is currently operating in temporary facilities. While in these facilities, enrollment at the school is to be kept at 80 to 100 students. About one-third of these are residential students who presently live in leased facilities on the campus of nearby Catholic University of America. The remaining students are bussed to school from the surrounding community.

Administrative, teaching, and support personnel have offices and work space in a second temporary building adjacent to the school.

Architects and school personnel are presently working on plans for the new permanent building to be built on 17½ acres of gently sloping land provided by the Gallaudet College at the northern end of the campus.

When completed in 1974, the new school will be a model in architectural and engineering design. Residential, instructional, and production areas are being designed to accommodate the latest in educational technology. Careful attention has been paid in the design of the building to the social as well as the learning needs of the students. When completed, the school will accommodate up to 600 students.

The educational aims of the MSSD students encompass goals which include a broad range of coping and processing skills, in addition to those of the purely cognitive nature. The MSSD student will have the greatest possible opportunity to develop self-determination and motivation; independence; a strong positive self-concept; sensitivity to and compassion for others; participatory skills in the dynamics of group living and interaction; and resources to contribute to developing social systems.

Instruction at the MSSD is individualized insofar as possible. The curriculum allows for different developmental patterns and learning styles of each student, and should be perceived by the student as being relevant to his particular needs, abilities, and interests.

Emphasis is placed upon activities which will help the student achieve the objectives, rather than upon grades. Grades are not issued, instead parents receive progress reports explaining how well their child is meeting his own objectives.

The total learning environment then, is positive, with the key to motivation being the satisfaction that comes from success, rather than the fear of failure or the threat of punishment.

A comprehensive curriculum is being developed which will be appropriate for deaf students in a high school. The base subject areas include English, social studies, mathematics, science, speech, and physical education. Elective subjects available to the student are Spanish, business education, art, home economics, and drama. In addition, such topics as cued speech, glassblowing, journalism, photography, and many other high interest activities are available to the students.

In all development of curriculum and materials, and in all teaching, helping the student to learn how to learn is given high priority.

The basic time unit at the MSSD, called a module, is 20 minutes. Students must have eight to 12 modules per subject each week in the base subject areas. A maximum of 48 mods is required each week in the base subjects. There is a total of 90 modules in a school week and the difference or the remaining 48 mods may be devoted to any subject the student selects. In this way, the student determines when he will study his subjects and how much time he will spend on a subject at one sitting.

Each student at MSSD can progress at his own rate of learning. This is made possible through the use of instructional packages or guidebooks which enable the student to reach specific educational objectives at his own pace. Standard classes do not exist at the MSSD. Instead, learning and teaching take the forms of tutorial and independent study, small group projects and activities, small group instruction, and large group interaction.

A typical learning activity might find a student being referred by her instructional package to a specific video tape of film to observe an experiment. The student checks out the tape or film and watches the experiment. She then returns to her instructional package and attempts the exercise on her own. After checking with her teacher, she returns to the instructional package and either takes a test or writes a final report.

Instructional packages in mathematics and English may ask the student to include as part of his lesson, work at the computer. Computer-assisted instruction in these subjects is provided by a telephone linkage with a computer at Stanford University in California.

Through the four major divisions of the MSSD—the Division of Instructional Services, the Division of Research, Development, and Evaluation, the Division of Instructional Systems and Media, and the Division of Professional Services—the MSSD student is provided with the most comprehensive educational experience possible today. The student has access to the latest audiological testing equipment; to competent speech therapists; to well-organized student health services, and to highly professional social and academic counseling. He receives vocational orientation and opportunities for training related to his own occupational objectives.

An environment for the education of the deaf must be media-rich and through the Division of Instructional Systems and Media, the MSSD student is provided with and instructed in the use of the most modern audio-visual equipment; such as television cameras, video-tape recorders, motion picture and slide cameras, and overhead projectors.

The Media Division also offers many supportive services to the faculty and staff; such as assistance in designing instructional sequences, stating objectives, preparing graphic and photographic materials, and operating the printing and reproduction services needed for production of instructional packages.

Learning and leisure are interchangeable at the MSSD as lessons sometimes take the form of field trips to one of the many landmarks which make the Nation's Capital and its environs a living history lesson. The students have visited the Smithsonian Institution, the U.S. Naval Observatory, the Explorers' Hall of the National Geographic Society, and the Gettysburg National Battlefield in Pennsylvania.

The MSSD has, of course, an obligation to share with other schools for the deaf what it learns by experimentation and innovation. Through the MSSD Office of Public Information, the continuing discovery of what works—and what doesn't—is communicated to the news media, to professionals in the field, and to others throughout the nation who are involved in the education of deaf youths.

This, then, is the MSSD: a new and promising beginning for the deaf students of high school age; a new and exciting school dedicated to preparing these youngsters to be independent and contributing members of society, thus enabling them to encounter—with higher odds for success—the hearing world.

RESOURCETERIA AND MORE

Ben M. Schowe, Jr., Ph. D., Model Secondary School for the Deaf

An absurd little tune came to mind as I prepared my pitch to you this morning. It begins, "The prettiest gal I ever saw was sippin' cider through a straw . . ."

The prettiest idea I have ever seen in education of the deaf is something I don't even have a good name for at this moment. In Columbus, Ohio, the school board used this idea as a "come-on" to persuade voters to approve the school bond issue this spring. They called it LIMC. It stands for Library-Instructional Materials Center. This lets my cat out of the bag but you won't really love my cat until I tell you what it is like.

Please note that it is just *one* cat. It has *one* heart directing its life-blood. And when you step on its tail, the whole cat comes to life instantly. Considering that this is a pitch for centers in the schools in which resources for learning are one unit with one director, the analogy seems appropriate. Let me explain why I think so.

When children or teachers come to a resource center or LIMC, if you like the term, they come with questions like, "How can I find out what kind of animal belonged to this skull?" or, "How can I help my children learn about seeds?" Even those who come in with more general questions like, "Got anything about mummies?" seem to be pleased when they are introduced to a variety of material in different formats from print to film, and even video tapes. Usually, I employ their aid in locating the materials. We can maintain eyeball contact with each other so I can direct the pupil's or teacher's search while conducting part of it myself. As we search together, pupils and teachers alike sometimes can see what I am doing on their behalf and gradually learn how to conduct their own searches with less help on later projects.

Some people have come to associate the word *cafeteria* with the concept of the LIMC. In a real cafeteria you go to select whatever food your fancy dictates. Likewise, you can select whatever learning materials your fancy directs in the resource center I am talking about. *Resourceteria* is an even more attractive term—Ray Wyman introduced me to that one. But, as delightful as I find this term, I am still not satisfied because it describes only the physical resources of a center from which a pupil or teacher may receive books, films, slides, pictures, projectors, television receivers, portable video tape systems, or whatever they may ask for. Resourceteria does not seem to suggest the complete services that people in the ideal resource center offer. The function of resourceteria personnel is not merely to keep steam tables of learning materials filled and dish up what you want.

Speaking of the ideal LIMC, it is also possible to think of the LIMC as a place where you may be offered a choice of *prescriptions* for learning, as well as having the one you choose filled on the spot. This would be a bit like going to a cafeteria where foreign dishes are a specialty and new ones are constantly being added. The servers will call your attention to the new dishes, describe their contents, and answer questions you may have about them. The server will be able to report on what previous diners have said about the new dishes and how well they went with other delicacies. The server might even offer dietary information, such as caloric value of each dish. . . . I hope someone thinks enough of this idea to remind me, after this meeting, to go see the cafeteria people. Perhaps they will reward me for the idea. . . . In other words, in addition to having learning materials all in one place to make for easy retrieval, the resource materials person will be able to indicate how a number of important concepts can be developed by using various materials with certain strategies and techniques.

It is logical enough to expect this service because directors who finally must select materials should know who may be expected to teach what at a given level. They must also know, besides when, where the topic will be taught and why it is taught, as well as how it might be taught. In effect, the *I*nstructional *M*aterials *P*ersonnel, let's call them IMPS, for now, sell innovative materials and ways to use them to supervisors and teachers.

In connection with this plea for central physical facilities and specialists who can relate all resources to learning goals, I am happy to announce that the organization fostered by the Convention, known as "School Librarians for the Deaf and Associates" has revised its bylaws and is vigorously planning future activities under the name of "Association of Resource Personnel Serving the Hearing Impaired" and the presidency of Mrs. Kenneth Huff. It clearly subscribes to the concept of centralized resource services: that a visit to a school resource center will reveal the total resources available, provide access to the materials for preview examination and selection, offer advice in selection and implementation when sought, and provide one-stop materials pick-up or delivery.

This describes my beautiful cat—come step on its tail for total action—you'll love it. If you want your cat to be like mine, consult, for example, *Standards for School Media Programs* by the National Education Association and American Library Association and *Standards for Library-Media Centers in Schools for the Deaf* sponsored by the Convention of American Instructors of the Deaf.

Among other organizations such as the American Association of School Librarians and the Department of Audiovisual Instruction, both associated with the National Education Association, encourage your school IMPS to join the "Association of Resource Personnel Serving the Hearing Impaired."

THE RESOURCETERIA CONCEPT

Raymond Wyman, Northeast Regional Media Center for the Deaf

Innovation is one of the major facts of life in education today. Anyone responsible for any aspect of education must spend a part of his time and energies in studying, evaluating and possibly applying innovations in his program. There are so many innovations to consider, that the task becomes almost impossible.

Education is often being divided into three parts or aspects for closer study and possible change. In a typical educational program, about 40 percent of a student's time may be spent in group presentations of one kind or another. Another 40 percent of his time may be spent in individual study activities. The remaining 20 percent of his time is concerned with some kind of interaction with his peers, his teacher, or manipulative devices. A great variety of educational media are being used to improve each aspect of education.

The presentation that involves only a teacher lecturing or talking to a group of students is frowned on by most everybody today. A presentation involving the weaving together of films and verbal communication, television and verbal communication, transparencies and verbal communication, real things and verbal communication, and amplified sound and verbal communication has proved far more interesting and stimulating to students.

Individual study that once consisted almost entirely of reading printed materials now is likely to take place in a carrel with a great variety of audio and visual materials available for study as needed.

Interaction that traditionally involved a teacher and a small group of students sitting in a circle with printed materials may now involve a powerful new tool called Mediated Interaction Visual Response in which each student and the teacher all have their individual overhead projectors for simultaneous visual responding.

Part of the revolution in education, then, involves the wide and wise use of media in the large group, individual study and interaction stages of education. There are good reasons for using media.

The traditional teacher talents of speaking, listening, reading, writing, assigning, and evaluating all based on essentially verbal communication can now be expanded and enhanced through the use of media. A teacher can present a wide variety of audio and visual experiences, either separately or in combination, in order to set the stage for meaningful discussion and assignments. The child who is flooded with multi-media experiences outside of his classroom must have a comparable quality and quantity of experiences within his educational domain. Only traditional teachers continue to feel that the chalkboard is any substitute for the projection screen and the television tube. Media also expand and enhance individual learning opportunities. Still and motion pictures with or without sound can easily be added to the world of print materials normally associated with individual study. Student reports that traditionally consisted of speaking or writing can be expanded and enhanced through the use of individually constructed audio and visual materials. Interaction which traditionally consisted solely of discussion can now involve the group reactions to individually constructed and observed materials in considerable variety.

Our efforts so far to attain wide and wise media utilization in the improvement of the total educational process have not been very effective. We have so far worked on only fragments of the total system necessary to improve education with media. We have concentrated on equipment, or materials, or local production, or room facilities, or assistance without ever considering the total system necessary. We have tried to incorporate audiovisual aids at the curriculum implementation level when we might have been far more successful if they could have been integrated as media systems and technology into the curriculum development phase of the educational program.

Special education and particularly education of the deaf provides us with a showcase for demonstrating what can be done with a complete system of education that involves educational media. We have a degree of support for, and a climate for showing all of education what can be done with media when we really try.

Neither the typical audiovisual center, nor the typical library is adequate for our current needs.

A resourceteria in each major classroom building would provide us with a giant step toward effective media utilization in the education of hearing impaired students.

The resourceteria would contain a library. It would not only contain a library of print materials, it would contain the great variety of audio and visual materials that have been produced for our particular needs. The library should be considered as a function rather than a place. The functions of the library aspect of the resourceteria would be to collect information in whatever form it might be available. It would classify information in a system providing for easy and efficient identification. It would store the information in orderly and effective fashion. It would retrieve information on demand for teachers and students. It would adapt information by changing its form or reproducing it. It would counsel on the use of information for studying, reporting and presentations. A common catalogue of all sources of information is, of course, essential.

The resourceteria would have a local production laboratory where both teachers and students could construct audio and visual presentation materials.

The resourceteria would have an equipment section so that any teacher or student use for audiovisual equipment could be provided for. Teachers of handicapped children have very special needs for equipment that should be catered to in every building.

Not only local libraries of materials, but ready access to additional outside materials must be available through a materials handling, maintenance, and shipping area.

Teachers and students need to observe materials before they are used for presentation to others. Some sort of isolated preview rooms are needed for this purpose.

Story telling with both print and non-print materials needs to be provided for. A comfortable and delightful little area adjoining the other activity areas needs to be provided with a fair degree of isolation. This room might also be used as a workshop and conference area.

Individual study facilities for the easy and complete use of all types of study materials must be available. These are commonly called carrels.

A professional person needs to be in charge of the resourceteria. In the smallest unit, he would probably be the only person involved. As the size and/or activities increased, he would need the help of a technical assistant and a clerical assistant.

A resourceteria in each major classroom building could do much to improve the education of hearing impaired students. It would promote and make possible the wide and wise use of media in the presentation that teachers make to their students. It would make the individual study of students far more interesting and productive. It would provide for more interesting, challenging, and communicative interaction sessions. It would tend to make media as much a part of the educational experience of children as it is now part of their extracurricular activities.

Most schools already have most of the pieces necessary to construct a resourceteria. A quotation from John Gardner is appropriate. "The parts of a desperately needed academic revolution continue to lie around unassembled."

Reading and Language

Chairman: Kenneth R. Lane, Professional Editor, Special Education Department, American Education Publications, Middletown, Conn.; *Recorders:* Philip E. Cronlund, American School for the Deaf; Dr. Ben Schowe, Ohio School for the Deaf.

10:30 a.m.–11:00 a.m.: "*Literacy—The Keystone for Providing More Opportunities for Deaf Children,*" Richard W. Flint, Editorial Director, American Education Publications.

11:00 a.m.–11:45 a.m.: "*Computer-Assisted Instruction in Language,*" Jamesine E. Friend, Director, Computer-Assisted Instruction for the Deaf Project, Stanford University, Stanford, Calif.

1:30 p.m.–3:00 p.m.: Demonstration.

3:00 p.m.–3:40 p.m.: "*Some Preliminary Research Results: Computer-Assisted Instruction for the Deaf Project,*" A. W. Douglas, Superintendent, Texas School for the Deaf; "*Computer Assisted Instruction in Language at the Kendall Demonstration Elementary School for the Deaf,*" Thomas R. Behrens, Ph. D., professor of education, director, the Kendall Demonstration Elementary School for the Deaf. Ben F. Provance, M.A.T., associate professor of education, the Kendall Demonstration Elementary School for the Deaf.

LITERACY: THE KEYSTONE FOR PROVIDING MORE OPPORTUNITIES FOR DEAF CHILDREN

Richard W. Flint, M.S., Executive Editor, American Education Publications, Middletown, Conn.

When Ken Lane asked me to give the opening address for the Language/Reading Section at this year's convention, it was early December and the first snow had fallen. June 30th seemed a long way off. Six months seemed like a sufficient amount of time for procrastinating. But once having agreed to speak, Ken then wanted the title of my talk by Christmas.

Consequently, when I sat down several days ago to organize my thoughts, after six months of procrastinating, I was convinced that any similarity between the title I selected in December and what I would want to say in June would be purely coincidental. However, as I started writing I realized that in making the opening remarks for today my major responsibility was not to delve into the specifics of teaching language and reading. This task is rightfully reserved for the speakers who follow. My task was to present some basic issues that would evoke a feeling of common concern, and perhaps, for some, provide a thrust toward needed action.

With this basic purpose in mind my December title, "LITERACY: The Keystone for Providing More Opportunities for Deaf Children," seemed workable after all. At least it was broad enough to encompass some basic issues that all of us should be willing to examine before dealing with specific methodologies and yet explicit enough to incorporate both language and reading.

As teachers of hearing impaired children, our common and major goal should be to help our students achieve the highest level of literacy possible. Literacy, after all, is the chief aim of any school. While schools may share with other institutions some responsibility for moral and social learnings, it is the school that has the unique and primary responsibility for increasing the quantity and quality of learning to read and write. If after 12 or more years our students cannot read and write at levels adequate to achieve personal, social, and economic self-fulfillment in line with their individual potentials, then the school is to blame. How we see this central task has a direct bearing on what we do in our schools.

The fact that the deaf are not achieving an adequate level of literacy is clearly demonstrated by the low level of achievement of those who attend and eventually leave our schools. The basic question we must ask ourselves is whether this low level of achievement is primarily attributable to their hearing impairment or more directly attributable to other variables. Professional honesty might well suggest that we opt for the latter. Critical examination of some of our educational practices, of course content, and methodologies suggest they are often inadequate and impotent.

There is considerable evidence to suggest that for the past half century or more our profession has been on dead center—drifting aimlessly in the muddy waters of mediocrity. We have been professionally static, devoid of vitality, anemic in the red corpuscles of thought, rendered sterile from the modicum of cross fertilization of ideas. For far too long we have remained an island unto ourselves.

Gone are the days when our professional arteries were being periodically transfused with the lifeblood of fresh ideas from a Horace Mann, a Gallaudet, a Melville or Alexander Bell, a Goldstein, a Yale, or a Pintner. Not within the last 45 years, with the possible exception of Fitzgerald's Key and Groht's Natural Language, has our profession given birth to a major innovation.

The inbreeding of teachers and administrators alike, while slowly changing since the advent of federal aid, has resulted in a standardization of content and a conformity in practices that border on the catastrophic. The paucity of behavioral research in the education of the deaf is so extreme that it's practically nonexistent. The changes and breakthroughs that have occurred during the past five decades have come, not from within our profession but from those disciplines ancillary to our profession—from medicine, audiology, linguistics, electro-acoustics and psychoacoustics.

My intent in speaking such harsh words about our profession is not to minimize any of the individual successes we may have achieved. Rather it is to complicate us open—to focus our attention on the need for self-examination. Not until we are distraught enough, not until we are sufficiently disillusioned and dissatisfied, not until we recognize that the low level of literacy that many of our students attain is as much related to what we do or don't do as it is to what our students do or don't do, will we be receptive to change. Not until we see ourselves as part of the total problem will we be ready to actively and persistently demand the kind of change necessary to bring about a dramatic improvement in their literacy achievement.

If certain current educational practices are contributory factors to their low educational achievement, including a low level of literacy, and if we fail to examine and change them, we are by our own complacency accessories to the fact. Let us examine the premise that the literacy and general achievement of hearing impaired students is low and unsatisfactory.

The results of the Boatner study, one of the largest and most comprehensive to date, are both revealing and dissappointing, yet significant. Boatner surveyed by questionnaire all of the schools for the deaf in the continental United States, with the exception of day classes. He sought to determine the educational achievement of all students 16 years of age and over who had permanently left school as of June 1964. The 99 schools he surveyed included all three classifications of schools: Public Residential, Public Day, and Denominational and Private. Of the 99 schools, 77 replied, representing an enrollment of 17,878 students, or 90.2 percent of all hearing impaired students enrolled in the United States.

The number of students from all respondent schools who were 16 years of age or older and who left school as of June 1964 totaled 1,212. Of this number 711 students, or 60 percent, received Vocational Diplomas, Attendance Certificates, or no certificate at all. Their average educational achievement, depending on type of school attended, ranged from 5.0 to 5.3. The remaining 40 percent, or 501, received Academic Diplomas with a mean grade average, depending on type of school attended, ranging from 7.3 to 8.2.

The Boatner questionnaire did not include provisions for gathering information relative to age of onset of loss or degree of hearing loss. Therefore, it is not known how many among the top 40 percent who achieved above the 7th grade level were born deaf. But undoubtedly the majority of our best achievers are hard-of-hearing or adventitiously deaf. Of interest, and significance, too, is the fact that only 70 students in the Boatner study—roughly 6 percent of the 1,212 leaving students—achieved at a Stanford or equivalent average of 10th grade or higher.

Boatner's findings reconfirm the generally low and static educational achievement, including low literacy facility, of students educated in schools for the deaf. His findings corroborate those that have been reported along the 40-year continuum of standardized testing, beginning with the Day, Fusfeld, and Pintner National Survey of 1928 to Miller's study in 1958. The Boatner findings indicate that there has been no significant change in the level of educational achievement of students in schools for the deaf from the mid 1920's to the present time.

Despite the fact that the number of years of school attendance during this 45-year period has increased significantly, from 10 percent to 20 percent, the achievement level remains more or less static. Three out of every five students who leave schools for the deaf, after 12 to 16 years in our care, have a final achievement level of 5th grade or below. No educator in this day and age can accept or defend such a low level of achievement. It's extremely difficult to see how 60 percent of our total annual output of students can possibly survive in the highly technological and competitive society into which they are thrust.

This, then, is the evidence. Its implications are clear and conclusive. The majority of students leaving our schools do not have adequate literacy levels to achieve social integration or economic self-sufficiency in the 20th century. Whether this low level of achievement can be totally attributed to hearing deprivation or to variables within the learning environment must be determined.

As teachers of the deaf, we need to develop a highly personalized concern that will cause us to question and challenge the status quo at every turn of the educational road. We need our own revolution: one that is orderly but dead-earnest. We need activists: professionals who will persist in breaking the deadly lockstep of educational mediocrity and conformity.

New methodologies, teaching strategies, and materials for increasing the level of literacy must be developed, borrowed, adapted, and tried if we are to provide greater opportunities for those we teach. Shortly we will hear from some of our colleagues who are challenging the status quo—professionals who are willing to experiment, test, and evaluate new materials, new methodologies, bold new ideas. But new materials and new teaching strategies alone will not suffice.

If we are to increase sufficiently our students' level of literacy we must at the same time challenge certain organizational and instructional practices that may also be contributing factors to inadequate levels of achievement and literacy. Most, if not all, of the following practices may generate dampening effects on student achievement levels and should therefore be methodically challenged, studied and tested:

(1) Integration of the hard-of-hearing with the deaf.
(2) Integration of preschool children with non-preschool children.
(3) Variation in class size.
(4) Whole-group instruction.
(5) Single textbook adoption.
(6) Assignment of beginning teachers to "difficult" classes

Like impotent materials and methodologies, any one or all of these current practices may be important variables in low literacy achievement that continue to negate greater opportunities for the deaf. Let us take a few moments to critically examine these six current practices.

(1) INTEGRATING THE HARD-OF-HEARING WITH THE DEAF

We need to determine if the integration of hard-of-hearing children with deaf children has an adverse effect on the educational well-being of members of either or both groups. Miller's findings suggest that such a practice denies equal educational opportunities to the hard-of-hearing. Her results show that the achievement of hard-of-hearing children tends to be similar to their deaf peers, thus suggesting a leveling effect. It also seems apparent that deaf children suffer educational inequities when they're integrated with the hard-of-hearing. The basic ego needs of all teachers—the need to sense accomplishment and success—tend to be fulfilled according to the quantity and quality of the responses received from those they teach. We tend to teach to those who respond best to our teaching. Further, we tend to set our level of expectations in terms of those students who appear to receive the greatest benefit from our efforts. When we disregard such human tendencies we may well be denying deaf children their right to quality education when we integrate them with hard-of-hearing students. Through integration we may wittingly or unwittingly eliminate certain refinements in methodology and the adaptation of materials they need because our levels of expectations are apt to be more oriented toward the hard-of-hearing. Consequently, the literacy levels of both groups may be impaired by integration.

(2) INTEGRATION OF PRESCHOOL WITH NON-PRESCHOOL CHILDREN DURING THE BEGINNING AND SUBSEQUENT YEARS OF THEIR FORMAL EDUCATION

The presence of such a practice may effect a leveling process similar to that which appears to occur when integrating the hard-of-hearing and the deaf. Any advantage that may be gained from preschool training may be dissipated when such children are placed in the same beginning and successive classes with non-preschool children. It's quite possible that the reason Craig's findings showed no significant differences in lipreading and reading skills between groups attending and not attending preschool was due to the leveling effects of integration, whereas Lane found a significant relationship between preschool training and final school achievement when preschoolers were accelerated.

Segregating the preschool from the non-preschool group would seem to be a critical variable in such studies. The advantage of preschool training may be lost in the replicating process if the preschoolers are integrated with non-preschoolers rather than being placed in an accelerated program. Integration of these two disparate groups in which one is held back while the other catches up may well pervert any advantage gained from preschool training that would increase their level of literacy and educational development.

(3) Variation in Class Size

It is quite apparent from observing current practice that there is no definitive criterion that supports a rationale for uniform and consistent class size in schools for the deaf. Groht suggested that the ideal number of pupils in a preschool class should be six or seven. My own personal observation would suggest that when the class size is maintained at 5 to 7 throughout the school life of the child, as is the practice in a few of the leading schools in this country, the learning environment is significantly and incontrovertibly improved. Mullen's study of the class size for deaf children in 34 large cities indicated a range from 5.0 to 22.7, with a median of 8.5. While many schools for the deaf may approach the suggested optimum size of 5 to 7 in the beginning years, and again as attrition takes its toll beyond 16 years of age, there is a strong tendency to lead classes in the middle years. Observation again indicates that a class of 10 is exasperating; 12 is next to impossible; 14 is glorified baby-sitting; and 18 or more morally corrupts the teacher, the students, and the institution. If we are to be more accountable for the ultimate literacy levels our students achieve we must determine the optimum class size or student/teacher ratio, if teacher aides are used, that will maximize individually guided instruction.

(4) Continued Use of Whole-Group Instruction

For nearly 50 years we have recognized the concept of individual differences and the fact that homogeneity in classes simply doesn't exist. Yet at the turn of the century, graded promotions were in vogue and partially accounted for the apparent success of whole-group instruction. Prior to compulsory attendance laws schools were more selective and could require students to achieve minimum standards in all skills and subject content areas before granting promotion to the next grade. In essence, an academic floor at each grade level was established that provided some semblance of homogeneity. It was this academic floor and a favorable student selection factor that made whole-group instruction popular and palatable—but perhaps never tenable.

Approximately 30 years ago the concept of graded promotion was virtually replaced by social promotion. Children were passed on to the next grade level despite their level of achievement in order to keep them with their social or chronological age group. The practice of social promotion, when combined with compulsory education, completely destroyed whatever defensibility whole-group instruction may have had. Despite these drastic changes in promotion practices and changes in school population, many teachers still approach their classes as if they were the highly homogeneous groups of the early 1900's. Even with an optimum class size of 5 to 7 some grouping is usually desirable or necessary—especially in those areas affecting growth in literacy.

Class size seems directly related to the type of instruction that occurs in a given classroom. In a smaller class there's greater opportunity for individually guided instruction and more effective grouping. In a larger class there's a greater tendency, often for the sake of the teacher's own survival, to revert to the more inappropriate and less productive technique of whole-group instruction. Here again, the continuation of whole-group instruction may undermine the level of literacy achieved by so many deaf children.

(5) SINGLE TEXTBOOK ADOPTION

Single textbook adoption for a given class was an accepted practice when whole-group instruction and graded promotions were in vogue. The basic assumption was that everyone was learning at the same level and same rate. In a sense, this was true. At least everyone supposedly arrived in a given class with certain minimum skills.

With the advent of social promotions and compulsory school attendance, the basic assumption of homogeneity undergirding whole-group instruction was no longer valid. Now it's not uncommon to find a spread in achievement level of several grades within a given class in each subject area. This is particularly true as students ascend the educational ladder. It is exactly this aspect of classroom reality that necessitates small-group and individually guided instruction and, at the same time, weakens the rationale that supports single textbook adoptions.

Yet few administrators have recognized the diversity of curriculum materials that a classroom teacher must have to effectively meet the relatively wide range of needs and abilities of students within a given class. A lack of multigraded materials virtually relegates a teacher to the more inappropriate and ineffective method of whole-group instruction. The students' achievement and literacy levels are perhaps again constricted when a single textbook adoption is imposed.

(6) ASSIGNMENT OF BEGINNING TEACHERS TO "DIFFICULT" CLASSES

It has been my observation over the past 20 years that in all too many instances, the beginning teacher's first assignment is either (1) a class of slow-learning children, or (2) a class comprised of multiple handicapped children, or (3) a class that contains two or three of the school's most severely emotionally disturbed children.

In no other profession does the neophyte begin with the most difficult assignment; these are reserved for the more mature and experienced professionals. It is the experienced doctor who treats the more severe and complicated disorders; it is the more seasoned lawyer who tackles the more difficult legal cases; it is the more experienced engineer who designs the bridge or the skyscraper. Often this is not the case in the education of the deaf. Too frequently the beginner is given one of the toughest assignments in the school—an almost demoniac "testing by fire". Little wonder that many beginning teachers stay for only a year or two and then seek escape through marriage, graduate school, or early retirement from the profession.

Administrators and experienced teachers should give greater support and assistance to beginning teachers. We need to remind ourselves that their graduation commencement was the beginning, not the end. A teacher becomes fully qualified only through experience. During the first two or three years, he is still learning, and the quality of that learning is directly proportional to the quality of the experience and supervision available. All too frequently no such supervision is provided. After all 6 to 8 weeks of student teaching is hardly sufficient time to master the content of a year's curriculum, to develop skill in the art of grouping, to become fully familiar with the variety and diversity of learning problems, to achieve finesse in classroom management, or to successfully learn to control and structure an appropriate learning environment.

If the beginning teacher is to achieve any degree of expertise and self-confidence, he must be given appropriate on-the-job support in a school environment that is conducive to continued learning. Final responsibility for teacher training must be assumed by administrators, supervisors, and more experienced teachers. This is the least a new teacher should expect. To fail in this important aspect of continued training is tantamount to professional suicide.

These six practices are representative of a larger number that must be systematically studied and evaluated if we are to more effectively discharge the school's primary responsibility of promoting greater literacy. How many more opportunities deaf children will have in this decade and the next is up to us individually and collectively. It depends on our willingness and ability to develop and try new and more appropriate materials and methods. It depends on our concerted and persistent effort to study, evaluate, and change those practices that are ineffective and impede the full achievement of their literacy potential.

A full measure of literacy is the keystone for providing deaf children with more opportunities in the future. Their right to a full measure of literacy is ours to give. May we be the antagonists, the catalysts, the doers that will help them achieve this fundamental right in this decade.

COMPUTER-ASSISTED INSTRUCTION IN LANGUAGE

Jamesine E. Friend, Institute for Mathematical
Studies in the Social Sciences, Stanford University

In June 1970, just one year ago, the Institute for Mathematical Studies in the Social Sciences at Stanford University received a grant from the U.S. Office of Education to design, implement and administer computer-assisted instruction (CAI) for deaf students. My staff at Stanford writes lessons and programs them to be run by the Stanford computer, and the lessons are then used by deaf students in some 12 schools across the country. In each of the participating schools we have installed student terminals, which I shall describe shortly. These terminals are connected to our computer by ordinary telephone lines so that when a student is using CAI he is in direct communication with the computer which presents exercises, receives responses from the student, evaluates his responses and decides which exercises to give him next.

Before I describe the computer system and how it operates to give instruction, I would like to describe what the student sees and how he interacts with the system. In a typical school there is one room containing, maybe, 10 or 15 student stations. There is one person, known as a proctor, who is in charge of the equipment and is in the room to supervise the children while they are doing CAI lessons and to help them if necessary. The children come into the terminal room, usually with other members of their class, frequently accompanied by their teacher. Each student sits down at any free terminal and starts his lesson for the day. The terminals themselves are very ordinary looking machines; they are standard Model 33 teletypes, similar to the teletypes used by hotel and airline reservation services, and really no more than a simple electric typewriter with the ability to send and receive code over telephone lines. The teletype is used as a typewriter by both the student and the computer, who simply take turns "talking" to one another.

When a student first sits down he starts the "conversation" by pushing a "start" key to let the computer know someone is there and ready for attention. The computer responds by typing

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HI
PLEASE TYPE YOUR NUMBER AND NAME.
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and the student then types his student number and his first name. Each student is given a unique student number when he is first enrolled for CAI so the request for the first name is merely an additional safeguard to ensure that the computer can correctly identify the individual student.

A student may be enrolled for several different CAI courses, perhaps for math and language, but he does not need a different student number for each course. He keeps the same number for all courses, and uses a one-letter course identifier to let the computer know which course he wants now. Here the student is using the letter G, the identifier for one of the language programs.

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HI
PLEASE TYPE YOUR NUMBER AND NAME.
G3456 MARY
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In less time than it has taken me to tell you about student numbers, the computer has consulted its file of students, found the student's last name and printed it, found out where the student left off on the previous day and decided where he should start today's lesson.

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HI
PLEASE TYPE YOUR NUMBER AND NAME.
G3456 MARY SMITH
   / / CHOOSE THE CORRECT PRONOUN.
I LIKE THAT GIRL.
I LIKE (SHE, HER).
```

I want to show just one example of how a student would interact with the computer in one of the language courses. The course contains a variety of kinds of lessons, and I will tell you more about the course later. Right now I will only mention that it includes a set of 25 lessons on reading and following directions. These lessons cover such things as the meaning of the ordinal adjectives, "first," "second," "third," and "last," and prepositional phrases using prepositions of position such as "above" and "below," etc. In this example the words "before" and "after" are used in the sense of spacial position, rather than a relative time.

```
   / / WHICH WORD IS AFTER "SOME"?
SHE SAW SOME BOYS PLAYING.
```

As you may know, this meaning of "before" and "after" is relatively difficult for deaf children; they tend to think of the primary meaning of "before" and "after" in the time sense, that is, in phrases like "before 2:00 o'clock" and "after I go to the movies," not in the sense of a linear spacial sequence. Because we want to use the spacial sequence meaning of "before" and "after" in a number of places in later lessons, we have provided a considerable amount of drill on this early in the course.

After the computer types the exercise, it waits for the student to respond. Now, of course, there are many responses the student could make. The most likely response is the correct answer, in which case the computer replies "correct" and immediately chooses a new exercise for that student.

```
   / / WHICH WORD IS AFTER "SOME"?
SHE SAW SOME BOYS PLAYING.
BOYS
CORRECT
   / / WHAT IS THE WORD BEFORE "PLAYING"?
THEY WERE PLAYING FOOTBALL.
```

On the other hand, he may not make a correct response so the computer must be prepared to deal effectively with the kinds of incorrect responses expected from deaf children. Here is a very typical "deaf" error.

```
   / / WHICH WORD IS AFTER "SOME"?
SHE SAW SOME BOYS PLAYING.
BOY
WRONG. YOU FORGOT THE "S."
TRY AGAIN.
```

And here is another.

```
      / / WHICH WORD IS AFTER "SOME"?
  SHE SAW SOME BOYS PLAYING.
  SAW
  WRONG. "SAW" IS BEFORE "SOME."
  WHICH WORD IS AFTER "SOME"?
```

Already in this simple example you begin to see some of the most important features and characteristics of computer-assisted instruction. You can see how such principles as immediate reinforcement, overt correction and so on are used to deal with each child individually. What is not so readily apparent from this example is the enormous behind-the-scenes mechanism that allows the computer to choose exercises for each student, tailored to his needs, with decisions based on a precise recollection of the student's past performance.

The capability of the computer to provide individualized instruction is enormous. This capability is not yet fully explored, but great progress has been made in the few short years since computer-assisted instruction was first conceptualized.

Without my having said so explicitly, I believe you now understand what it is we are trying to do at Stanford: we are trying to provide each student with a private tutor, a teacher's aid who will be understanding, tolerant and persistent, one who will never lose his temper but will always be polite, one who will know each student's strength and weakness so well that no student will be either frustrated by work that is too difficult for him nor bored by work that is too easy. We want each student to learn to the best of his own abilities and as efficiently as possible.

Getting back to the example we have before us, I want to emphasize that while our hypothetical student here is struggling over the word that comes after "some," there are over 100 students in his school and other schools throughout the country who are also seated at teletypes doing their own lessons, all in direct individualized communication with the same computer. To understand how the computer can "talk," seemingly simultaneously, to such a large number of people, you must realize that a modern digital computer works at an incredible rate of speed and that it has an enormous memory, so that it can spend a small fraction of a second with one student, switch immediately to the next student in line for a very short time, and so on down the list of students until it reaches the first again without forgetting just where it was in each of the hundred conversations. This kind of "round robin" activity is so fast that each student has the impression he is receiving the full, undivided attention of the computer.

I will not go into the details of the configuration of the system we have at Stanford; for those who are interested, such details are available in technical reports put out by the Institute. It is one of the largest computer centers in the world entirely devoted to computer-assisted instruction and has been in continuous operation since the earliest days of CAI.

We have been developing computer-assisted instruction programs for almost 10 years now at the Institute and our efforts have spanned many diverse fields:

Curriculum	Length of course	Grade level
Initial reading	3 years	K–3.
Math drill-and-practice	6 years	1–6.
Logic-and-algebra	2 years	7–9.
Computer programing (basic)	1 semester	High school.
Russian	2 years	College.
Computer programing (AID)	1 semester	Do.
Basic English	do	Do.
Logic-and-algebra	do	Do.

Besides the above programs, we also have several new programs under development:

Curriculum under development	Amount	Grade level
Algebra	1 year	High school.
Language arts for the deaf	2 years	7–9.
Transformational grammar for the deaf	1 semester	High school.
Conversations for the deaf		1–12.

Most of the work we have done in the past has been for normal hearing children and adults. A little over three years ago, however, Dr. Behrens of the Kendall School for the Deaf in Washington, D.C., came to us with the suggestion that our mathematics drill-and-practice program might be appropriate for use by deaf students and that he would like to try it with the students at Kendall. As it turned out, it was not only appropriate, but enormously successful. That was our first venture into the use of CAI by the deaf and also the beginning of a continued association with Kendall School for the Deaf and its near neighbor, the new Model Secondary School for the Deaf. About two years ago, Stanford, in association with Kendall and the Model Secondary School, started a pilot study of the use of CAI as a vehicle to teach language to deaf students. The success of that pilot study led to the U. S. Office of Education's interest in funding the project we are working on now.

As I mentioned before, we received direct funding from O.E. in June 1970 to prepare computer-assisted instruction for the deaf and to provide that instruction to students in the schools that are participating in the project. We are to concern ourselves primarily with the areas of mathematics and language, using whatever is appropriate in the existing math curriculum, and starting afresh with a language program for junior high school age deaf students. We are also committed to doing related basic research in the areas of learning theory and psycholinguistics.

The schools that have participated in this project from the beginning are Kendall School for the Deaf, a day school; Texas School for the Deaf and the California School for the Deaf at Berkeley, both of which are residential schools; and 11 day classes in 4 schools in San Jose, California. The schools I have just mentioned joined us in writing the proposal for the project and in meeting with the site visiting committee from the Office of Education; these schools will continue as participants for the duration of the project.

Also, during the first year, several additional schools became participants. The Model Secondary School began operation in November and 8 day classes in Palo Alto started in February. We now have a total of 64 teletypes operating in schools and day classes for the deaf, with over 1,000 deaf students enrolled in 7 different courses.

Although much of our effort during the first year has been in the installation of equipment, teacher training, and the daily operation of the system, our biggest concern and greatest effort have been in the development of language arts programs. In our efforts in this direction we have been substantially aided by teachers and administrators in the participating schools, and by a consulting board of educators and researchers in deaf education. We are working simultaneously on three very different programs in the field of language; the first, "Language Arts," is a drill-and-practice program that I will describe in some detail in a few minutes, the second is an experimental program that will teach generative-transformational grammar in a rather unique new way, and the third is a conversation program that will be used primarily as a communication device and whose essential purpose is to provide us with a data base for the design of conversational programs. The last two programs mentioned, I will not spend much time on, so let me say just a few words about them before talking about the language arts program listed first.

The last mentioned program, the "conversation" program, is still under development and will be in use next September. From a student point of view, the program will act like a telephone operator; it will ask the student what number he wants to call and will make the connection for him to any other teletype hooked into the Stanford computer system. The students are then free to converse about any subject they choose.

CHRIS: HELLO, ARE YOU FINE TODAY?
LARRY: YES, I AM FINE. THANK YOU.
HOW IS YOUR SCHOOL?
CHRIS: WE HAVE SUMMER VACATION.
WHAT WILL YOU DO AT VACATION?
LARRY: I HAVE FUN.

The conversation will not, at first, be restricted in any way, but it will be continuously monitored and recorded so that we will be collecting a substantial amount of data on the spontaneous use of language by deaf students. (Incidentally, if any of you are bothered by the "invasion of privacy," I want to mention that the program states clearly, before any conversation is started, that the conversation is being recorded. Those who have anything very private to say will thus be advised to use some other method of communication.) Our ultimate aim is to write a conversational program that can "chat" with a deaf student, providing him with a model of idiomatic, grammatical English, and with mechanisms for indicating to him any errors he makes in syntax, etc.

For the moment, the program will be used primarily to provide incentive for using written English as a means of immediate communication, and to provide an opportunity to practice in an environment that provides its own reward. We have done some preliminary testing of this program with students in several schools and the immediate acceptance and interest on the part of the children were very gratifying. They were very eager to use the program, had no difficulty whatsoever in learning to operate it, and quite literally had to be dragged away from the teletypes to get them back to their classes on schedule.

The transformational grammar program is also an experimental program at this time; it has been used in just the last few weeks by a very small number of students at Kendall and at the Model Secondary School and will probably not be ready for more general use for another year. The aim of this program is to provide instruction in generative-transformational grammar in a very rigorous way, related more to the teaching of symbolic logic or axiomatic algebra than to the more conventional methods for teaching grammar. The rationale for this course and a description of the work to date will be forthcoming as a technical report within the next few months and those who are interested may want to write me for a copy. Basically, the computer is programmed to produce grammatically correct English sentences, acting on commands given it by the student. The student is free to give any rules he wishes, choosing whatever sentence patterns he likes, whatever kinds of noun phrases and verb phrases he desires, etc., and whatever transformations he would like the computer to use. As long as the rules requested by the student will produce grammatically acceptable sentences the computer will accept them and will act on them to produce the sentence the student has specified. Here is an example of one exercise from one of the early lessons.

```
You type    Computer prints                    You type    Computer prints

            (NP) TASTES GOOD.
/PLU....... (NP) TASTE GOOD.                               (NP) TASTE GOOD.
/NP3....... (D)(N) TASTE GOOD.                 RULE....... /NP3
D.THE...... THE (N) TASTE GOOD.                            (D)(N) TASTE GOOD.
N LUNCH.... THE LUNCHES TASTE GOOD.            RULE....... D.THE
            (NP) TASTES GOOD.                              THE (N) TASTE GOOD.
RULE....... /PLU                               RULE....... N LUNCH.
                                                           THE LUNCHES TASTE GOOD.
```

The exercise starts with a brief review for the student, listing for him the rules he must use to transform the incomplete sentence

(NP) TASTES GOOD.

to the complete sentence

THE LUNCHES TASTE GOOD.

Almost all of the typing, including the various stages of sentence construction is done by the computer. All the student is required to type are the short rules immediately following the word RULE. The generation of the sentence itself is done by the computer. In this example, the student started with a plural transformation, using the rule /PLU. This rule calls for a pluralization of the subject of the sentence, so the (NP), i.e., noun phrase, which is the subject, is then internally tagged as plural. The only visible effect of the /PLU rule at this first stage is the change of the verb from "tastes" to "taste" for subject-verb agreement.

Next the student gave the rule /NP3, calling for the third type of noun phrase, the determiner-noun type, here symbolized as (D)(N). The numbering of noun-phrase types is arbitrary and the student is provided with a list of rules and their meanings so that he can refer to the list if he needs to refresh his memory; most students, however, will have memorized at least the first three noun phrase types by this time.

The student is now faced with the sentence form

(D)(N) TASTE GOOD.

which will become a finished surface level sentence after substitution of actual words for the symbols (D) and (N). This substitution may be made in any order; in this case, the student worked from left to right, substituting first for the determiner and then for the noun. I do want to point out that the student could have substituted any suitable determiner and noun here and they would have been accepted; for example, he might have produced

AN APPLE

or

MOST ORANGES

and the computer would have generated the sentence he requested whether or not it fulfilled the requirements of this particular exercise.

Notice that the student made a noun substitution by typing the singular form of the noun, not the plural that he actually wanted. In all cases, the students must know, and use, the simple or root form of a word, and the inflection will be taken care of automatically.

At the moment we are working with a very small dictionary—about 600 words—but hope to expand this to several thousand words soon. Although this program is concerned only with syntax and not with semantics, the difficulties in programming a computer to produce English sentences are not easily overcome and will probably not be completely solved for some considerable time.

I do want to mention before I go on that this program has been developed as a joint effort with the Model Secondary School and will be made available to other schools by their kind consent.

I would now like to move on to the language arts program which is the largest and best developed of the three language programs I have mentioned. We started the detailed design and development of this course in July last year and students started using the course in February of this year. The course consists of a "library" of lessons, each of which is between 20 and 30 exercises. The lessons may be taken in any order, and may be repeated or omitted if desired, so that each teacher can plan the sequence of lessons to fit each individual child. Each lesson is preceded by a short pre-test so that more gifted or more knowledgeable students may take only 6 or 7 exercises in a lesson while those students who need more assistance may do up to 30 exercises. We now have over 100 of these lessons written and programmed and will be producing at least 100 more in the next year, making a total of over 4,000 exercises.

The course is designed for deaf students of junior high school age. Most of the students we are working with are between about 12 and 16 and are reading at about the 3.0 reading level as measured by standardized tests such as the Stanford Achievement Test or the Metropolitan. In order to accommodate children with a low reading level, we have carefully controlled the vocabulary and sentence structure used in the instructions and exercises; the reading level is held to about third grade level as far as vocabulary is concerned and the complexity of the sentences is held to an even lower level, as I think you could see from the couple of examples I showed earlier.

A language program for the deaf is necessarily much different than a language program for the hearing. The deaf need training in speech and lipreading, for example, things that are not at all a part of the hearing child's language training. On the other hand both deaf and hearing children need to learn how to read and write, how to spell and punctuate correctly, how to use the dictionary, how to express themselves fluently and grammatically, and so on and so on. Many as these similarities are, there is one basic, striking difference in the needs of the deaf and hearing child—and that is the need of the deaf child to learn *language*—not to learn to read or to spell—but to learn the significance and structure of language itself. For most hearing children in an ordinary public school classroom, the reading program resolves itself into two primary components: the development of decoding skills, and language development. Decoding skills are those skills that enable the child to translate, word-by-word, from the printed symbols to the spoken word. These skills include the ability to apply grapheme-phoneme correspondences for phonetically represented words and also to recognize, on sight, a large number of irregular (non-phonetic) common words. For those children who speak English fluently before beginning to read, which includes most hearing children, these word-by-word decoding skills are all that must be learned. For the most part, if a hearing child can pronounce each of the individual words in a sentence, he can understand the meaning of the sentence. Some children may also need a little additional language development, primarily vocabulary development. Children who are in some way culturally or socially deprived may need not only vocabulary development but also help in more basic skills such as the correct use of English inflections. A deprived child may, for example, say "I's gon' go to town today, Miz Friend." He needs help to learn to replace "I's" with "I am" or "I'm" and to replace "gon' go" with "going to go." Although this kind of speech pattern is indicative of a kind of language deprivation, and one that may possibly be quite severe, it is important to note that the child has already internalized the role of inflection and syntax. He understands that verbs take different forms in different contexts, even though he does not yet know that "I am" is preferable to "I is." He also understands the use of word order; he would never say "Town go me, Miz Friend."

When we speak, the meaning of any given utterance is far more than the meanings of the individual words we use. Meaning is imparted not only by individual words but also by two more basic language devices: syntax, that is, word order, and inflection, that is, alternate forms of root words. As an example of how syntax influences meaning, consider the two sentences, "Mike hit Toby" and "Toby hit Mike." The meaning of either of these two sentences cannot be gleaned from the meanings of the individual words themselves. It is instead the syntax—the order of the individual words—that imparts the true meanings to us.

The second basic language device is inflection, illustrated here by two inflections of the verb "to laugh"—she laughs, she laughed. I could also have given you examples of inflections of nouns, pronouns, adjectives and determiners. Almost all languages use both syntactical and inflectional devices; some languages, such as Russian, are more highly inflected than English, that is, they use more forms of a single root word than we do. Some languages rely less on syntax than English does, and some languages, spoken languages, that is, use also the device of intonation. Vietnamese, for example, is an intonational language. Intonation plays some role in spoken English, too. The difference between "*Mike* hit Toby" and "Mike hit *Toby*" is in the intonation pattern, which can only be roughly approximated in the written language by using such devices as underlining, and exclamation points. Luckily for our deaf students, intonation is relatively less important in English than syntax and inflection are.

I have gone into these basic language devices in some detail because I want to point out to you that this is where deaf students are deficient and where they really need the most help—not in spelling or even in vocabulary—but in language itself. A basic insecurity about the fundamental role of syntax and inflection is common among the deaf, especially the prelingually deaf. Those children who are born deaf or who become deaf before they have acquired language and who are deprived of the normal exposure that produces language in the hearing child, may never internalize the basic principals of language that the hearing child assimilates at an early age.

Now, before I go too far overboard, and leave you thinking that I am advising against teaching vocabulary, I want to spend a few minutes on the subject of words and their meanings, and try to relate that to my previous remarks. If I were to try to give a mathematically precise definition of language, I would start by saying that a language consists of two things: a lexicon, that is, a list of words, and a grammar, that is, a list of rules for how to put those words together. What I have been talking about—syntax and inflection—is a part of the grammar, the bare bones of the language. But the language is not just grammar; it also needs some flesh, some words to fill in the blanks, and that is the vocabulary, or "lexicon." People in recent years have become fond of classifying words into two categories: content words and function words. Content words are those that have some meaning in and of themselves, like "house" or "boy," while function words are almost entirely meaningless when taken out of context. What, for example, does "of" mean? My little pocket dictionary lists 18 different meanings for the word and I wasn't able to understand any of them until I looked at the examples. I rather like the classifications of "content" and "function" but I think that they really don't go far enough; the situation is more complex than that. For example, it is certainly clear that some words that are ordinarily classed as function words do also have some real meaning of their own. All of you, I am sure, feel that you know what "if" means even if you can't express it clearly and concisely. Even more obvious examples are words like "in," "on" and "under." These three prepositions are function words but they certainly have solid enough meanings, at least in some contexts, so that we can draw pictures and point to them and say this picture illustrates "in" and that one illustrates "on."

Even though the guidelines for distinguishing content words from function words are not perfectly clear, it is clear that the function words do play a different role in sentence structure than the content words do. In fact, it seems that the function words are more a part of the sentence skeleton, and as such a part of the grammatical structure of the language rather than a part of the lexicon, and that the meanings of function words cannot be understood, or learned, except against the background of the syntactical and inflectional devices that form the grammar.

Getting back for a moment to my rudimentary definition of language, then, I gave language two major attributes: grammar and vocabulary, and I put syntax under grammar and function words under vocabulary, but really that classification was a little presumptuous of me because of the interplay of syntax and function words that I have just mentioned. Also, how can one consider inflections independently of the words that are being inflected? "Houses" is an inflection of "house" and "singing" is an inflection of "sing," and these words should not be considered as four distinct words in the content vocabulary, but as two words "house" and "sing" with their associated inflections.

These are not the only ways in which my model of language is oversimplified; I could name many more: where, for example, do idioms fit in? In particular, what does one do with the verb-preposition idioms like "run out" and "look for" and "have on" that are part content words and part function words and have meanings quite different from the sum of the meanings of the two components? Also, where in my structure does the idea of grammatical transformation occur?

So I will be eager to admit my model is oversimplified and not adequate to describe language in any really serious way. For today, though, it will serve the purpose of a schematic representation that I can point to, to show you where I feel the language-deprived deaf youngster is most notably deficient and where he needs as much help from all of us as he can get, namely, in the area of grammar, both syntax and inflections, and in the area of words.

I would not, in any way, want to imply that we believe the total language program of the deaf should, then, exclude vocabulary development or work on idioms or development of logical thinking skills or any of the other myriad aspects of a complete language program. Nor am I implying that we at Stanford will not extend our work to any of these other areas (in fact, as I already mentioned, we are simultaneously working on a couple of other programs). What I am saying is that for the language arts program we are now putting our greatest effort into, we are focusing almost exclusively on what we feel to be the most fundamental characteristics of language: syntax, inflections, the function words, the relationships among these, and the way they are used to express meaning.

To come down to earth just a little, I would like to express these rather broad objectives in somewhat more concrete terms. Here are some of the topics we will take up in lessons dealing with the structure of the simple noun phrase.

THE SIMPLE NOUN PHRASE

Determiner-noun agreement
Formation of plural nouns
Syntax of adjective strings
Number, case and gender of pronouns
Double nouns and their inflections
Distinction between mass and count nouns
Determiners used with mass nouns
Partitives

Verb phrases will also be covered in considerable detail, as will the relationships, both syntactical and inflectional, between noun phrases and verb phrases.

VERB PHRASES

Subject-verb agreement
Tense, past and present
Formation of present and past progressive
Use of modals
Perfect aspect
Separable and non-separable double verbs

Under the general heading of modifiers, we are listing adverbs, adjectives and prepositional phrases used to modify nouns or verbs.

MODIFIERS

Classification and position of adverbs
Relation between time and tense
Syntax of prepositional phrases
Idiomatic use of prepositions
Intensifiers
Comparative and superlative adjectives
Subordinate clauses

Under the heading "Sentence Patterns and Transformations" we consider broader aspects of the relations between component phrases.

Direct objects
Indirect objects
Double direct objects
Negation
Coordination
The passive construction
Question forms and question tags
Question responses

The Language Arts course begins with an introductory lesson and a set of 25 lessons on the language of directions.

INTRO	Introduction
DIR 1	first, second, third word
DIR 2	after
DIR 3	first, second, third, fourth, last word
DIR 4	first, second, last letter
DIR 5	first, last letter
.	
.	
.	
DIR 22	under
DIR 23	below
DIR 24	above
DIR 25	above, below, under

The introductory lesson teaches the students how to respond by typing their answers, how to indicate that their response is complete, and how to type special characters, such as a space between two words. There are some exercises emphasizing the difference between similar characters such as the "O" and the zero, or the letter "I" and the digit "1." The first lesson also contains some exercises introducing special response modes, such as numbered multiple choices, that will be used extensively later in the course.

The 25 lessons on directions are aimed at getting the students to read and respond to precisely worded directions of the types that they will encounter in later lessons. These directions might be something like "Which is the first word in this sentence?" or "Type the third word." The specific vocabulary includes the ordinal adjectives, "first," "second," "third" and "last"; the prepositions "after," "before," "under," "below," and "above"; and the sentence connector "and." The syntax of the directions varies to include both imperatives (Type the number below 5.) and interrogatives (Which number is below 5?). In the prepositional phrases, the object of the preposition may be a direct reference (Type the number under the word "baby.") or it may be an indirect reference (Type the number under the third word.).

We have found that these lessons have been very well received; both teachers and students have been quite enthusiastic about them, and the learning seems to be substantial. The different amounts of time needed to go through these lessons are convincing demonstrations of the amount of individualization of instruction allowed by the course; some students have gone through all 25 directions lessons in two days, while others have needed up to two weeks.

After the directions lessons, the main body of the course begins with a set of lessons on the structure of the noun phrase.

NAA	common nouns, introduction
NAB	common nouns, continued
DAA	determiners "a," "an" and "the," introduction
MAA	mixed drill: identification of nouns and determiners
MAB	mixed drill: nouns and determiners
LAA	vowels and consonants
DAB	determiners: use of "a" and "an"

Identification of nouns and determiners is introduced and then the correct use of "a" and "an" is covered. In the following lessons other frequently used determiners such as "some," "every," and "no" are introduced one at a time. Then they are compared and contrasted.

Here is a sequence of lessons a little further along in the course.

NAC	plural nouns: introduction
NAD	plural nouns (-s)
NAE	plural nouns (-s, -es)
NAF	plural nouns (-ies)
NAG	plural nouns, mixed
NAH	plural nouns, irregular
DAD	determiner-noun agreement in number; cardinals
MAE	determiner-noun agreement: "some," "every" and "no"

The formation of regular plural nouns is drilled. Then some irregular plurals such as "man-men," "child-children" are reviewed. The concept of determiner-noun agreement of number is introduced in lesson DAD using the cardinals "one," "two," "three," etc. The concept of agreement of number is extended in lesson MAE to include the use of "some" with plural count nouns and the use of "every" and "no" with singular count nouns.

The lessons continue in similar steps, gradually bringing in other concepts such as position of adjectives within a noun phrase; use of other determiners; distinction between mass and count nouns and appropriate use of determiners; pronouns, and the correct use of number, case, and gender; and then into work on verbs, auxiliaries, tenses, and so on.

As I mentioned before, there are over 100 of these lessons now prepared and we plan to extend the course substantially in the next year. We have had over 400 deaf students enrolled in the language arts course this spring, and we are now in the process of analyzing some of the results.

Before closing, I would like to briefly discuss the massive amount of data we are collecting to be analyzed. As each student does an exercise, the computer automatically records each response he makes, analyzes the response for correctness, records the time of day to the nearest second, and stores all of this information on each student. Later we can look at this data and find out in a very precise way how students react to this kind of instructional material. We will have not only summary statistics on the entire group of students but will also be able to look at students individually and compare their performance on any exercise with group norms for that kind of exercise.

The kind of research we are planning will help us to learn how to improve the lessons and how to make them even better for deaf students. The research will also enable us to answer more basic questions about how deaf students acquire language and how they should best be taught.

SOME PRELIMINARY RESEARCH RESULTS—COMPUTER ASSISTED INSTRUCTION FOR THE DEAF PROJECT

A. W. Douglas, Superintendent, Texas School for the Deaf

Mr. Lane, Mr. Flint, Mrs. Friend—the school has long been interested in CAI, and literally jumped at the chance to join in the Stanford project—as a matter of fact, I believe we "volunteered" our services before we were invited.

During the fall of 1970, fifteen terminals were installed in one classroom, with a sixteenth available as a spare.

We were most fortunate to acquire the services of a former computer programmer to act as proctor for our Lab. After a week of training at Stanford, and with her previous knowledge, I feel that she has been most successful.

The racket with all terminals going is horrendous. (The proctor steps outside occasionally to rest her ears.) As you may know, each two of our classrooms share a ventilating wall—merely louvers to permit the air to circulate. I thought at first I would move a deaf teacher into the adjoining classroom so the noise wouldn't bother.

The students went on the computer for the math program in February. The language program was available about mid-April—so we have a maximum of six weeks of experience with it. Approximately fifty students were enrolled for either two or three periods a week. As time on the computer was limited to twenty minutes a session, no real statistical data are available. However, two or three items did show up on the teacher comments on the program:

1. The teacher should be reasonably familiar with the vocabulary of the computer, and, in some instances, preteach unfamiliar terms.

2. Even in six weeks, it was generally felt that students were improving in learning to follow directions—at least from the computer. There was no indication of fall-out into regular classroom activities.

3. The students were enthusiastic about the CAI, and may have welcomed the activity as a break in daily routine, although five of the teachers involved are young, enthusiastic, innovative teachers, who leave students with little opportunity to become bored with procedures.

In summary, both staff and student body accepted the idea of CAI in language development, and are not only willing, but anxious to give it a longer and more serious a trial next year.

As for the Mathematics program, we had a total of 253 students on the computer, and I had final reports on 228. From this point on, any statistics I might present would probably be the most invalid and misleading to have ever been presented to this august body in its entire history.

The students were started on the computer at a pre-determined level, lower than their score on Arithmetic Comprehension on the May 1970 Stanford Achievement Test. So far, fine.

But because of our involvement with the Office of Demographic Studies, our Stanfords, this year were given in January, about the time the students were beginning the use of the terminals. So—our figures for comparison are from our May Metropolitans. Any increment from the previous Metropolitan covers three semesters work rather than the expected two.

However, there do seem to be trends developing.

Our High School students, in general, had much less time on the Computer than did the Elementary students, so inferences cannot be as solid.

In general, the Metropolitan scores were considerably higher than the sign off level on the computer. In instances where previous Metropolitan test scores were available, (given three semesters earlier) the increments ranged from one student remaining the same through many gaining a year, to several as much as two years and more. (Nobody went down!)

One student—a bright ambitious transfer to our Junior class, was having a rough time with algebra because of computation difficulties. He had 201 sessions on the CAI, ended up with a CAI score of 7.4, a Metropolitan score of 7.3, and passed Algebra!

Our Junior-High group—our group of teenagers who are unable to pursue the regular academic track, received from 50 to 110 sessions on the terminals.

Again, Metropolitan scores were considerably higher than the CAI scores, and the Metropolitan scores of 1971 were all acceptably higher than the scores of 18 months previously. Our elementary group grades 3, 4 and 5 made much the same history. These students are in the straight academic track, and had from 100 to 150 sessions on the computer. Almost all ended the semester at grade level on CAI figures, and at, and usually above, on Metropolitan figures.

In conclusion, we haven't had time since school closed, nor do we really have data on which to make any real scientific prognostications.

We will continue this math program, and expand the number of pupils using it, if we can, for the following reasons:

1. The students enjoy it—horse-play is almost non-existent in the Lab.

2. The teachers think that because of the computer's brief time lapse before requiring a response, and demand for an eventual correct response, there is a carry-over in class work of greater speed and less carelessness.

3. The strong indications that the students are learning more in less time than under usual teaching methods.

I might add, that on our recommendation, several of our County-wide Schools are installing up to four terminals for fall use, and we, ourselves, are hunting space for an additional fifteen.

COMPUTER ASSISTED INSTRUCTION IN LANGUAGE AT THE KENDALL DEMONSTRATION ELEMENTARY SCHOOL FOR THE DEAF

Thomas R. Behrens, Ph. D., Professor of Education, Director, the Kendall Demonstration Elementary School for the Deaf and Ben F. Provance, M.A.T., Associate Professor of Education, the Kendall Demonstration Elementary School for the Deaf

It has been almost two years since the Kendall Demonstration Elementary School began working with Stanford University to develop a Computer Assisted Instruction Language Program for the deaf child. In May and June of 1970, the Kendall School served as a pilot school for lessons very similar to the ones now being used by various schools across the country. We used the CAI Language Arts Program with students in what we called our "advanced department". These students ranged from 13 to 18 years of age. Because of the short period of time, and because our previous scheduling had been for CAI Mathematics, scheduling was often "catch as catch can" for working on language drills. However, it was not uncommon for the supervisor of the CAI room to discover students working language drills when they were scheduled for math drills. I might add that this still happens occasionally!

The number of lessons during that experimental run was somewhat limited but there was enough variety to permit teachers to select lessons most appropriate to the individual students' needs. This feature has been one of the strong points of the program as far as our teachers are concerned. Individualized instruction implies that the teacher can "zero in" on areas of particular need for the individual student so that one might find a group of students in the CAI room, all working on different lessons in accordance with a particular area of need.

Last Fall, with the opening of the new Model Secondary School for the Deaf, we found ourselves with a different student population. This group was of elementary age, generally 10 to 14 years of age. We made the decision to attempt a rotating schedule for the elementary students; thus we had to find times for the students of various classes for both CAI Language and Mathematics. We discovered that we had an open block of time for many of the students. CAI seemed to be the perfect substitute for study hall. However, we learned in short order that this is not true. Putting 15 or 20 students into CAI on "off hours" did not work. Classroom teachers, students, and the CAI monitor did not have adequate communication; consequently, we found problems arising in the CAI room with students mis-using the lesson materials and mistreating the equipment.

Scheduling has been one of our greatest problems. We used three different methods of scheduling this year. One method was to schedule an individual student for a particular period of time daily. This method required finding a time slot for every student, which in turn required pulling the student from a classroom or eliminating part or all of a particular content area from his schedule. In connection with this approach, let me tell you that CAI falls below physical education in popularity with the students!

The second method of scheduling we tried was to divide a class into two sections. One section went to CAI, while the other remained in the classroom. At the end of the scheduled time period, the two sections reversed roles. Because some students work faster than others, we found ourselves confronted with many stragglers in the hallways. It is surprising how very easy it is for students to become "lost" between the classroom and the CAI room. Another problem with this method is that it did not give the teacher the "open" or planning time which we believe to be one of the advantages of the CAI drill-and-practice program.

The third method we used this year was to schedule an entire class for a particular time period. However, we found that if the class was large, some students had to wait in turn to use the computer terminal. Also, for those who worked fast and completed their lessons, another time-gap occurred in which these students had nothing to do. Another problem with this method of scheduling is that in order to schedule all students, a class could be scheduled for only two or three periods of time per week. We found this to be less satisfactory than scheduling a very short period of time daily. Our Language Arts schedule was one and one-half hours daily. During this period, the teacher had to cover grammar, reading, and composition. For scheduling the CAI Language Arts work, either one or two forty-minute periods were scheduled weekly. Thus, we sometimes found a teacher objecting to "interrupting" a unit of work which she had planned for the class. Occasionally, the teacher "forgot" to bring the class for CAI work.

In planning for the future, we are considering some changes. We have found that daily use for even a very short time-period is more beneficial than a long period once or twice a week. If scheduling of our content areas remains similar to the present, classes will be scheduled for CAI from the Language Arts period. The classroom teacher will accompany the class to the CAI Center. At this point, she may either be required to remain with the group or be permitted additional planning time of perhaps 15 minutes. At the moment, this depends upon funds becoming available to employ an aide in addition to the Supervisor of the CAI Center.

We have found that when the teacher is with her class in the CAI Center, an abundance of "on-the-spot" teaching occurs. The teacher also can evaluate the reaction of the student to the lesson and become much more aware of problems which she had not previously anticipated.

Another feature which we plan to include is a short orientation of the students concerning the hardware. There have been times when students have smashed the terminals. We hope that by showing them the mechanisms of the teletypes they will in turn show more respect for the equipment.

For the CAI language program to be fully utilized, proper teacher-training is a necessity. We have been very fortunate along that line. Because we work with Stanford in the development of the program, we have one staff member who serves as liaison between Stanford and our school. This person has an in-depth knowledge of the program and lessons. Our teachers can contact him any-time something occurs which isn't understood. Mrs. Friend visits periodically to spend time with our teachers, explaining further aspects of the program. When we first began the new program, she spent an orientation period with the language arts teachers explaining much of the program and its technical aspects. Our liaison person has asked the teachers to "run" a lesson before assigning it to a student. They are also expected to "run" lessons each time new lessons are added. In this way, the teacher becomes familiar with the content of the lessons and many times can foresee areas or items where the student may encounter difficulties. In addition to this method of previewing lessons, we also have the outline furnished by Stanford. We have found that teachers often run different lessons and mark areas of difficulty. In this way, they are able to exchange the printouts, thus lessening the time involved on previewing lessons.

We have discovered that a CAI monitor must be capable of doing more than just overseeing the classroom. The program demands a person with full understanding of the CAI system, knowledge of the technical aspects of the CAI programs, knowledge of the operation of the programs, and a background in deaf education, as well. Our plans for next year are to have a person with all of these qualifications as our Supervising Teacher of the CAI Center. We further believe that better and more meaningful communication between this supervisor and the classroom teachers will improve utilization of the CAI programs.

The duties of the Supervising Teacher will include record keeping, evaluation of students' actions and reactions, and elimination of irresponsible or unprofitable use of the CAI. We sometimes find a student signing on to the program, using another student's number and thus totally disrupting that student's record.

While we have had our problems, we believe that our students are profiting from this program. Generally, our teachers have used the material properly—that is, as drill and practice.

Last year, we had three language arts teachers. They were given complete freedom in how they approached the use of CAI language materials. Generally, the teachers required the students to bring the printouts back to them, and during planning time looked over the students' work. Two of the teachers were consistent in staying with the group in the CAI room. As one of the teachers commented, "If you don't give immediate correction, it's meaningless next week".

In order to have a record of which lessons the students had worked, or were to work, the teachers took similar approaches. One teacher made up a ditto sheet which she filled in with the selections for each individual student. Another teacher simply used 3 by 5 file cards listing which lessons the student should work. Each student was responsible for his card, which was kept in an envelope attached to a bulletin board. The third teacher used file folders to which had been attached the list of all available lessons. With all of these methods, upon completion of a lesson, the student simply checked off the lesson as shown on the list. Our liaison person used a master chart listing all students and all lessons. By using the daily report from Stanford, he was able to keep a record of the over-all picture of use of the CAI Language Program.

In closing, I want to share just a couple of incidents with you. About a month ago, we decided to experiment with the program to see what would happen if the CAI language program were used with students who had no background with formal grammar. Three eight-year-old students were selected. The language program was used as a motivator in the sense that the students were required to do two CAI math drills before they were permitted to work on the grammar course. We found these three pupils' speed and concentration on the math drills improved considerably because of their desire to work on the language course. Previous to the experiment, the classroom teacher was quite concerned that the students might become frustrated too easily. As a matter of fact, the students did extremely well, and the *teacher* became frustrated because the other students in her class were insisting that they also should work on the "G-Course".

One morning I dropped by the CAI room to see what was happening. I noticed a young boy sitting with a rather puzzled expression on his face. It seems that the teacher had asked him to "Wait a minute", for her to help him with a problem. He, in turn, had typed "Please wait one minute", which, unfortunately, the computer did not understand, and he received a "Wrong" rather than the "O.K." that he expected. This same student has been know to type such messages as: "I don't know . . . "I don't understand" . . . and "I haven't learned that yet" . . . It would appear that certainly with this child, the CAI Language Program is a *communication* success.

We have found that even with scheduling problems, the CAI Language Program has proved beneficial to our students, our teachers, and to our school program. It has served as an impetus to the teachers in their planning and as a tool to the students in getting immediate feedback or reinforcement on their work. We believe the CAI Language Program has contributed to the growth in language of many of our students. We are working on the appropriate utilization of the program and hope to have our scheduling problems solved by the beginning of the next year.

We are no longer concerned about the *effectiveness* of the CAI Language Program. We are convinced that it *is* effective.

PANEL DISCUSSION

Philip E. Cronlund and Dr. Ben M. Schowe, Recorders

Immediately following Mrs. Friend's formal presentation and demonstration, a panel of administrators of several schools involved in the federally funded computer assisted instruction project fielded questions from the audience. Panelists were Mrs. Friend of Stanford University, Director of the CAI project; Mr. Albert Douglas, Superintendent of the Texas School for the Deaf in Austin; and Mr. Leland Clack, Special Programs Supervisor of the Kendall School for the Deaf in Washington, D.C.

Discussion generated the following information.

1. Students involved in C.A.I. do not necessarily have to be proficient in typing. Involvement with teletypewriters in use has demonstrated that the necessary skills will develop naturally through practice. (Generally the hunt and peck method is used.)

2. At this time the basic problem of making C.A.I. available to school facilities is one of financing.

3. The cost of such installations has several variables to be considered among which are that a 24 hour terminal costs roughly $350.00 a month. An additional cost variable is the telephone connection between the terminal and the Stanford University computer.

4. It would be possible to have C.A.I. installations in more locations as a computer can handle twice as many as it is presently handling. As additional machines are added in different locations, the cost per unit would be decreased at each school because of the time-sharing aspect.

5. Once a school has the installation, all of the curriculum programs on the Stanford Computer would be available to schools for selection and use.

6. Schools are encouraged to write and experiment with their own programs. As many additional programs can be handled on an experimental basis as the computer has the capacity to handle.

7. At the present time there are seven programs for the deaf. A program of driver education will soon be added.

8. Proctors, monitors, or teachers should be on hand to aid students needing help beyond the "advice" of the program. Teachers can interrupt a student in a program if they feel that the student needs reinforcement. In short, C.A.I. is not a sacrosanct communication or learning experience which excludes the teacher.

9. The teacher should go through the program in order to be best prepared and to be able to determine suitability for students. The programs are ungraded—some as short as five minutes and the learning task need not be burdensome.

Preschool—Lower School Auditorium

Chairman: Dr. Freeman McConnell, Director, The Bill Wilkerson Hearing and Speech Center, Nashville, Tenn.

10:30 a.m.–11:45 a.m.: "*A New Responsibility: Deaf Children from Birth to Three,*" *Chairman:* Freeman McConnell, The Bill Wilkerson Hearing and Speech Center.

10:30 a.m.: *Introduction*—Freeman McConnell, Nashville, Tenn.

10:35 a.m.: "*The Bureau of Education for the Handicapped's Concern for Early Intervention Program,*" Dr. Max Mueller, U.S. Office of Education, Bureau of Education for the Handicapped, Washington, D.C.

10:45 a.m.: "*The Learning Environment,*" Kathryn Horton, Bill Wilkerson Hearing and Speech Center, Nashville, Tenn.

10:55 a.m.: "*Parent-Teacher Interaction,*" Mary Tidwell, John Tracy Clinic, Los Angeles, Calif.

11:05 a.m.: "*Parent-Child Interaction,*" Dr. June Miller, University of Kansas Medical Center, Kansas City, Kans.

11:15 a.m.: "*Handling Parents' Feelings,*" Laura Knox, Bill Wilkerson Hearing and Speech Center, Nashville, Tenn.

1:30 p.m.–4:00 p.m.: "*Management of Deaf Children from Birth to Three,*" Informal Discussion Panel—Moderator. Freeman McConnell, Dr. Max Mueller, U.S. Office of Education, Dr. Rollie Houchins, University of Kansas Medical Center, Dr. Audrey Simmons, Central Institute for the Deaf, Sue Lillie, Bill Wilkerson Hearing and Speech Center, Emily Miller, Bill Wilkerson Hearing and Speech Center.

1:30 p.m.–3:00 p.m.: Experience, Rationale and Results; Programing Language Input; Programing Acoustic Input; Programing Visual Input.

3:10 p.m.–4:00 p.m.: Implementation of Programs for Deaf Children Under Three.

THE LEARNING ENVIRONMENT

Mrs. Kathryn B. Horton, Bill Wilkerson Hearing and
Speech Center, Nashville, Tenn.

(This presentation was a combination of videotape and narrative)

Man as a distinct genus has been on earth for perhaps a million years. It took him 99 percent of that time just to get ahead of other living species that might have done him in. From the beginning, man had a brain superior to animals around him. The only thing that he lacked was an accumulated store of knowledge. With the development of a language system, he made a quantum leap in solving that problem. In the last 10,000 years, he has continued to develop with increasing rapidity his singly most human characteristic—his specialization for learning. The propensity to learn is so deeply ingrained in man that learning might justifiably be described as involuntary behavior. The question is not "Will the child learn?", but rather "When will he learn most readily?", "Under what circumstances will he learn best, and with what combination of tutelage will his learning prosper?" In other words, "What is the optimum learning environment?" For the child with limited hearing, thus with potentially limited language, this question is critical.

The first question is "When does the child learn most?" The potential for human learning is greatest in the earliest years of life. It has been estimated that 50 percent of a child's intellectual development takes place between conception and age four, 30 percent by age eight, and the remaining 20 percent by age 17. Thus, the most potent period for facilitating learning occurs before the child goes to school. This answer to the "when" of learning points to the "where" of learning—the child's home. And the "where" points to the "who"—the child's parents. The challenge to all of us interested in the education of children with limited hearing is housed within the "when", the "where" and the "who" of the learning environment.

The next and crucial question—"What are those circumstances under which a child learns best?" The child learns best when there is a continuous, uninterrupted affectionate interaction both verbal and nonverbal between him the learner and his parents the tutors.

The child learns best when he is bathed in language—language which serves the dual purpose of being a medium of communicative exchange and an instrument of environmental ordering and control. The child learns best when the environment provides for him a model to emulate and affords him maximum opportunity for gaining increasing independence and for exploiting his natural curiosity.

The parameters of man's learning are substantially known, the application of these parameters to optimize learning is possible. The final question—"Are we willing to commit ourselves to the task of applying what we know?"

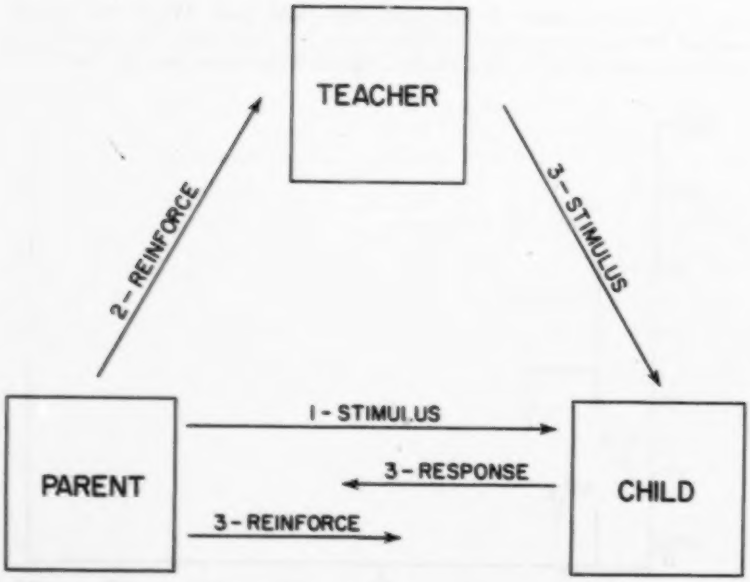
PARENT-CHILD INTERACTION

June Miller, Ed. D., University of Kansas Medical Center

Parent-child interaction has been a very fascinating topic for the persons in the field of early childhood education and family life. A great deal more emphasis has been placed on this in the past few years as it has related to the total problems in the field of child growth and development and more recently as it applies to children from deprived areas, e.g., the war orphan.

Parent-teacher organizations, and parent institutes for hearing impaired children came on the scene about 1947. We have all felt that in most instances the mother has been the teacher of her child until she enters school. Nevertheless, the question of the meaning of a teacher of a child certainly has not been and probably should not be the same as the role of the classroom teacher for hearing impaired children. However, beginning parent homes have involved the parent to the degree that the role sometimes has been confused. As we begin to culminate our program, we have seen some of the strengths as well as some of the problems that were created in the parent-child interaction during the project. At the initiation of our Parent Home Project, the parents felt that they should sit down at a table and work with their child in a very formal way. We removed tables at which the children would be worked with in a formal manner, only to have one parent arrive with a small card table and chair for the formal presentation at her next lesson. We have moved, however, from the more formal activity in the program to a more flexible one. I think some of you may have seen the model that I have used in other situations. The parent talks to the child, the teacher reinforces the parent's activities, and eventually when the parent was able to get the child to listen or to look, or both, the child's responses became a reinforcement for the parent (Figure 1). The next step is to more verbal input from the parent to the child. When the child begins to imitate that which he sees, it is another reinforcement. This interaction has been very necessary because if the parent does not get a response from the child, the parent becomes discouraged and gradually diminishes his verbal input to the child. To me this has been one of the greatest strengths for parent-home projects as contrasted to parent institute. When the parent returned home and did not have a follow-up, he tried to imitate the pattern of the teacher. Now the parent plans his lessons, works with his child, and creates an atmosphere for communication. It is most important that the parent understand that he has a great deal to offer his child, and that the response of the child would be delayed if he does not learn to communicate or did not learn to wait until his child begins to communicate.

Parent-child interaction has also been involved with discipline. Many parents, when they have discovered that their child's hearing was impaired, gave in and gave up with discipline so that they had no control over the child whatsoever. For those who had the most severe problems, the parent was taught to handle the child's tantrums, screaming, removing of ear molds, etc., through a behavior modification program. In Figure 2 is found the data of a parent


TEACHER
2 - REINFORCE
3 - STIMULUS
PARENT
1 - STIMULUS
3 - RESPONSE
3 - REINFORCE
CHILD

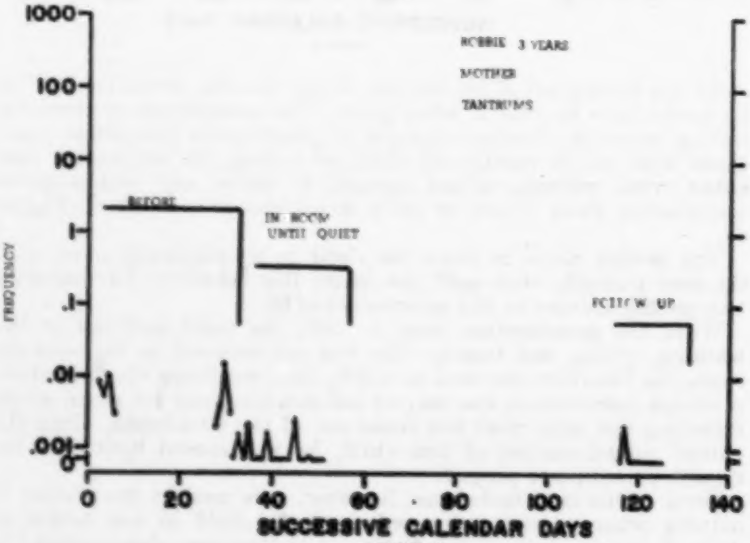

ROBBIE 3 YEARS
MOTHER
TANTRUMS
BEFORE
IN ROOM
UNTIL QUIET
FOLLOW UP
FREQUENCY
1000
100
10
1
.1
.01
.001
0
0
20
40
60
80
100
120
140
SUCCESSIVE CALENDAR DAYS

FIGURE 2

counting the number of tantrums her child had. When the parent learned to walk away and let him have his tantrums, the number of tantrums was greatly reduced. In Figure 3 the same parent found the child was hitting out at his brother. Every time he struck his brother he would have to wear a white glove. This punishment reduced his hitting behavior. Another example of parent-child interaction came about with an 18 month old child who clung to her mother and either cried, whined, sobbed, gasped, or yelled and had negative vocalization about 45 out of every 60 minutes of class time (Figure 4).

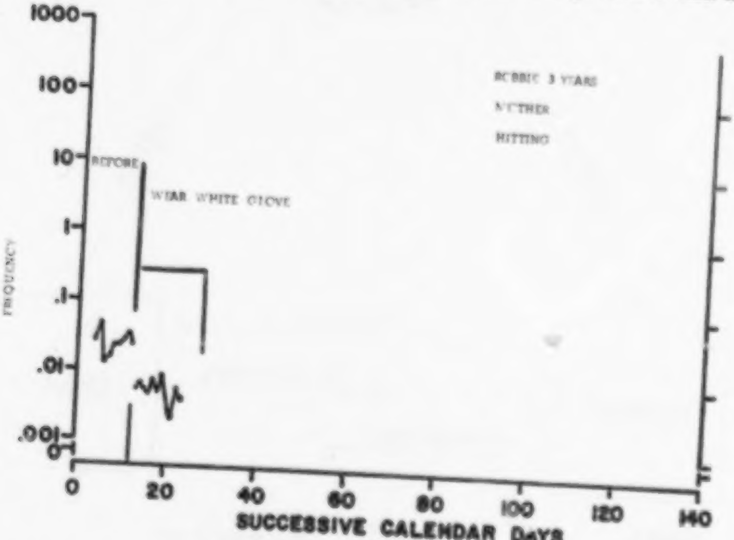
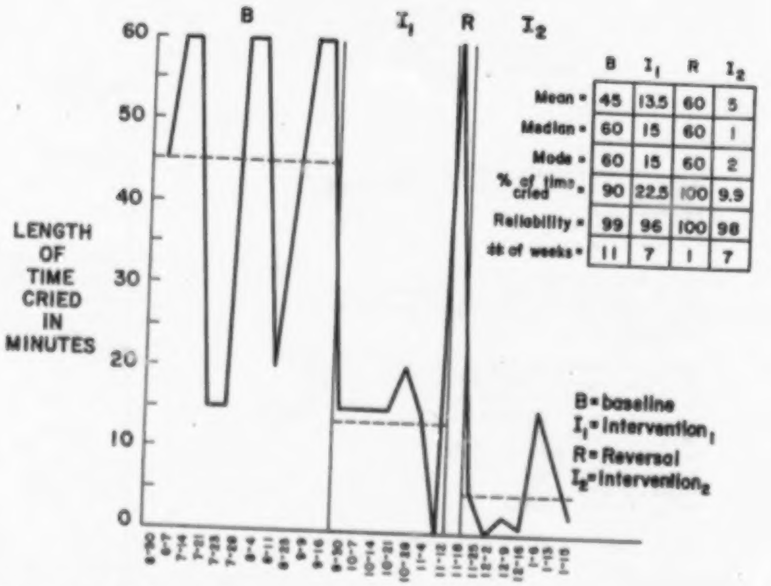


FIGURE 3

The mother chose to place the child in an adjoining room with the door partially shut until she ceased this behavior. The behavior was quickly lowered to 13.5 minutes out of 60.

When the grandmother came to visit, the child returned to her whining, crying, and fussing. She was not removed to the adjacent room, the behavior returned to 100%, thus verifying the procedure. A second intervention was carried out this time and for seven weeks following she only cried five times out of the 60 minutes. Once the parent gained control of this child, he was moved back into the regular parent home project.

Some of the same techniques, however, were used by the teacher in helping other parents gain control of the child in less severe or dramatic kinds of situations. Various activities were demonstrated to the parent in the parent home. This taught the parent to help the child carry on similar activities when they got home. For example, when the mother vacuumed the rug, she let him feel the vacuum cleaner. She attracted the child's attention to the refrigerator door,



	B	I_1	R	I_2
Mean =	45	13.5	60	5
Median =	60	15	60	1
Mode =	60	15	60	2
% of time cried =	90	22.5	100	9.9
Reliability =	99	96	100	98
# of weeks =	11	7	1	7

and repeated the act so that he could see what was going on. The child might respond to a knock on the door when Daddy comes home from work. The mother might have the child assist her when she made the beds. The mother talks to the child as the child helps her wipe the dishes, or puts away the groceries, etc.

After the first year a video tape was acquired. Parents were filmed on their first visit. It was quite interesting to see the difference in parent-child interaction between the first, twelfth and twenty-fourth visit.

Initially, the parents talked very little to their children. The child was physically moved or changed from one place to another. At other sessions a parent, after receiving instructions, was video taped with his/her child while they were both involved in some home type activity. The tape was then played back and parents could view themselves in interaction with their child. This gave them an opportunity to observe themselves implementing the techniques which they had learned. Some parents were very critical of their own performance.

In the initial segment, the teacher and the child were filmed (Chart I). An attempt was made to illustrate the child's ability to: (a) respond to sound, (b) speechread, (c) understand language, and (d) speak. Standard items were used. Items used for the "response to sound" sequence were a drum, a large "clicker." In the speechreading sequence were a shoe, doll, doll clothes, a car, and pictures. Pictures were used in the speech sequence.

Assessment by Videotape
(Child and examiner are seated on two chairs
at table. An additional chair is placed at
the table.) The Parent(s) are in the room.

Child | **Equipment**

Directions:

1. Examiner demonstrate 3-block tower - tear down, encourage child to replicate. Follow with:
   3-block chair
   5-block bridge
   7-block bridge

7 blocks

Call child by name — Response to sound
While child is playing with blocks, hold large cricket 2" from child's center back and sound.

If he responds, follow with: small cricket then baby rattle, the DIP Auditory Discrim-Test (Practice Plates B and D).
Plate B - Say, "where's the ____________ (boat)
Plate D - Kite
Plate VI 20 - Boy
Plate VI 24 - Bone
Plate VP 29 - Feet
Plate VIP 43 - Thumb

If he does not respond, sound drum.

large cricket
small cricket
baby rattle
drum
DIP Auditory
Discrim. Test

Directions:

2. Say, "Find Mama." (Or Daddy) — Speechreading

If the child looks at parent, place doll, car, and shoe on table.
Say, "Give me the baby." (Hold out hand.)
If response is correct, say "Show me the eyes"
"Show me the nose"
SShow me the mouth"
Put the doll clothes on the table (put shirt, pants, coat, socks) and say, "Give me the shirt"
"Give me the pants"
"Give me the coat
Tip Test - B1, B2, B3
B1 - Point to the ____________
pie, airplane
B2 - Point to the ____________
gum, hand

doll
shoe
car
doll clothes

shirt
pants
coat
socks
Tip Test

Directions:

3A Show first plate of Peabody Picture Vocabulary Test. Point to item listed. Begin on page 1 car (if no response to Peabody Test, proceed to 3B). If child responds, continue through Peabody until child stops responding. — Speech

knife	(p.2)	baby	(p.3)
dog	(p.4)	shoe	(p.5)
hand	(p.6)	boat	(p.7)
key	(p.8)	bell	(p.9)

Peabody Picture
Vocabulary Test

3B Prepare to leave room, pause at door and say, "bye" attempting to elicit speech from child. indicate to parent to seat herself-himself at table with child.

4. During parent/child sequence initiate loud sound (e/g/, ring large bell).

In the second segment, the parent and child were filmed. The parent was instructed to bring something to eat or something to do. No other instructions were given. During this sequence a loud noise was initiated, at least once, by someone outside the child's and mother's range of vision. An attempt was made to videotape this sequence every twelve weeks during the family's tenure in the program to determine the child's and parent's auditory responses.

To obtain objective measurement of progress a method of scoring was devised using scoring sheets, one for the teacher/child sequence

SCORING SHEET I
(Videotape Assessment)
Child with Teacher

Scored by: ______________________ Child's Name ______________________

Position: ______________________ Birthdate: ______________________

DIRECTIONS: Check (✓) for correct response.

1. Response to sound. Check (✓) if wearing hearing aid. Check if child turns head toward sound source.
2. Speechreading. Check (✓) if child makes an appropriate response to command or request.
3. Speech. Check (✓) if expresses correct word. (Correct vowel pattern is acceptable.)

Response to sound

Date of Videotape				
Day				
Mo.				
Yr.				
Tape No.				
No. Weeks Hearing Aid				
1. Drum				
2. Large Cricket				
3. Own Name				
4. Small Cricket				
5. Rattle				
Speech				
6. Boat				
7. Kite				
8. Boy				
9. Rope				
10. Fast				
11. Truck				

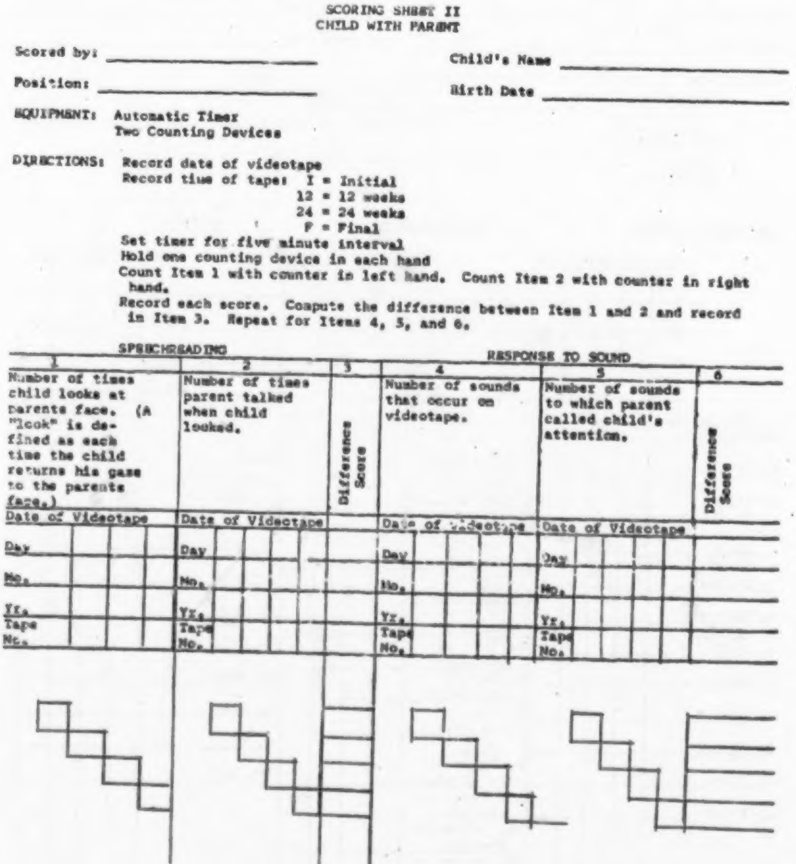
Speechreading

Date of Videotape				
Day				
Mo.				
Yr.				
Tape No.				
1. Find Mama (looks off camera)				
2. Give me the baby				
3. Show me the eyes				
4. Show me the nose				
5. Show me the mouth				
6. Give me the shirt				
7. Give me the pants				
8. Give me the coat				
Book				
9. Point to the airplane				
10. Point to the pig				
11. Point to the gum				
12. Point to the hand				

Speech

Date of Videotape				
Day				
Mo.				
Yr.				
Tape No.				
1. Bye (imitative)				
Book				
2. Car				
3. Knife				
4. Baby				
5. Dog				
6. Shoe				
7. Hand				
8. Boat				
9. Key				
10. Ball				

(Chart II) and another for the parent/child sequence (Chart III). Scoring Sheet I was used by videotape viewers who checked those items which the child "passed" i.e., (1) response to sound, (2) speechreading, and (3) speech. Scoring Sheet II was used by viewers to compute a difference score in percent between: (1) the number of times the child looked at the parent's lips and the number of times the parent spoke, and (2) the number of sounds that occurred during the filming sequence, the number of times the parent called attention to sound. Only those sounds initiated by staff members during the filming sequence were labeled "sounds that occurred." Graduate students in the deaf education program at the University of Kansas Medical Center participated as viewers. Mechanical timers



SCORING SHEET II
CHILD WITH PARENT

Scored by: ______________________ Child's Name ______________________

Position: ______________________ Birth Date ______________________

EQUIPMENT: Automatic Timer
Two Counting Devices

DIRECTIONS: Record date of videotape
Record time of tape: I = Initial
12 = 12 weeks
24 = 24 weeks
F = Final
Set timer for five minute interval
Hold one counting device in each hand
Count Item 1 with counter in left hand. Count Item 2 with counter in right hand.
Record each score. Compute the difference between Item 1 and 2 and record in Item 3. Repeat for Items 4, 5, and 6.

SPEECHREADING			RESPONSE TO SOUND		
1	2	3	4	5	6
Number of times child looks at parents face. (A "look" is defined as each time the child returns his gaze to the parents face.)	Number of times parent talked when child looked.	Difference Score	Number of sounds that occur on videotape.	Number of sounds to which parent called child's attention.	Difference Score
Date of Videotape	Date of Videotape		Date of Videotape	Date of Videotape	
Day	Day		Day	Day	
Mo.	Mo.		Mo.	Mo.	
Yr.	Yr.		Yr.	Yr.	
Tape No.	Tape No.		Tape No.	Tape No.	

and counters were used by the viewers on section one of Scoring Sheet II.

During the past year, it appears that in carefully scrutinizing our program in its final stages, the staff determined that there were some parents who were good teachers of their children, but who had ceased to enjoy them. Some had been so busy teaching that they had not had an opportunity to enjoy, play with, cuddle, and love their child in a natural way. We found that there were fathers who felt that being a father-teacher was not his masculine duty. His duty was to provide food, clothing, and shelter, but it was not his responsibility to become a language stimulator. During the past year these feelings have been expressed during a father's monthly discussion group that has been directed by male members of the staff and the male Doctoral candidates. We think there is another problem in the parent-child interaction. I recall Mrs. Tracy saying, a number of years ago, that her Susie said one day at the table, "Why don't you look at me when you talk? You always look at John?" While other members of the family have come, the center has concentrated primarily on the hearing impaired child. More emphasis needs to be placed on the sibling-hearing impaired child relationships in larger families. In some families the sibling-hearing impaired child relationships come about quite naturally, in other environments the children must be taught how to react to one another. It appears to us that many of the parents and children are far more comfortable with each other than similar type families in some of our other programs.

Parent Home programs are new. Preparation for personnel to teach in these programs is different than professional preparation for classroom work. Helping the parent and child develop a warm, comfortable, insightful relationship is one goal. Another, is the development of a knowledge of the handicap, while still another is the development of communication at a very early age. The change in the relationships and communication skills have been demonstrated by the change in behavior of the hearing impaired children and their parents who have had the benefit of our Parent Home program.

HANDLING PARENTS' FEELINGS

Mrs. Laura Knox, Bill Wilkerson Hearing and Speech Center, Nashville, Tenn.

(A videotaped presentation was made involving the parents of two children who are participating in the program at this time.)

After five years of teaching in the Home for Deaf Babies, I am absolutely convinced of the critical importance of what you just heard that mother say—the necessity for parents to express their feelings—whatever they may be—to someone who will listen. Parents enter an infant program with many different kinds of feelings; for some, the diagnosis of a hearing loss is the confirmation of their worst fears; for others, it is a new and terrifying idea.

Since the teacher is the person with whom the parent has primary contact, it is, I believe, absolutely essential that the teacher create an atmosphere in which the parents feel free to talk and say whatever is on their minds, realizing that they will not be judged for feeling the way they do. A teacher has no right to play God. Realizing they will *not* be told they *shouldn't* feel that way, that's the way they *do* feel—but knowing they will be accepted and affirmed as whole persons. Since so much of a *teacher's* time is spent in this kind of activity, it seems to me essential that training programs provide students with the skills they will be called upon to use so often. Not *one moment* of any graduate course I took was oriented toward helping me become an understanding, empathetic, non-judgmental listener. I feel we are giving graduate students a *onesided* education when we turn out highly skilled technicians, methodologists, and clinicians, but people who are almost *impoverished* in terms of being able to relate openly, honestly and directly with other human beings. My plea to you is that you exert whatever influence is yours to provide *prospective* teachers with the experiences necessary to become *aware* of and *sensitive* to the feelings of other people. It is through this route, I believe, that we reach parents!!

MANAGEMENT OF DEAF CHILDREN FROM BIRTH TO THREE

Mrs. Sue Lillie, Bill Wilkerson Hearing and Speech Center,
Nashville, Tenn.

Our program is housed in a Demonstration Home. The population we serve is parents of deaf infants 0-4 years of age. Our philosophy is based on early identification, early intervention through education and guidance of the parents, and a strong emphasis on maximizing the child's residual hearing. Binaural amplification whenever possible is basic to our approach.

To develop and encourage maximum use of a child's residual hearing we have capitalized on the ever present and ever developing visual ability of the child. This intact sensory modality, vision, is utilized to strengthen his imperfect sensory modality, audition. Although we do not cover the face when talking to the child, no formal attempt is made to teach the child speechreading skills.

Our initial goal is to make the parents aware of the presence and variety of environmental sounds. Sounds to which they as adults so frequently respond automatically. These functional sounds of daily living are the sounds to which the parents must call to their child's attention. The means by which this is accomplished is a very visual listening expression.

The parent learns to select sounds from the child's daily environment and constantly reminds the child of the presence of sound by an open mouth, open eyed, hands to ear response. This listening expression tells the child that something special has happened, that something special is the production of a sound. The parent responds to the sound, looks in the direction of the sound source, and repeats the sound when possible. The parent again responds to the sound both with the listening expression and by initiating the appropriate response to the sound. The parent in a matter of seconds tells the child visually that sounds exist, sounds have a source, sounds have meaning and that listening and responding to sound can be fun.

(Videotape presentation of Webb family calling attention to sound)

Regarding language input, the parents are given guidelines for the kind of talking that goes on during the frequent interactions between parents and children. They are encouraged to move in close to the child whenever possible. Short simple sentences that are redundant and specifically about what is happening at that moment are encouraged. The parent learns to take advantage of their child's interest in an activity by supplying him with good verbal input to match what the child sees. As a result, a simultaneous visual input is immediately matched with an auditory input which describes what the child is seeing. There is no delay in time between the two. For example, the mother doesn't tell the child she is going to pour the juice and then seconds later the child sees the pouring, rather the mother tells the child she is pouring the juice as the child's eyes focuses on the action. This is best demonstrated in the next brief videotape of Mrs. Emily Miller, a teacher in the Home.

Almost without exception, children with severe hearing losses will have to depend heavily on speechreading skills to be truly successful. Our observations have been that those children who are successful in developing their residual hearing also have been found to be good speechreaders. The reverse of this has not been found to be true. We do feel that with early identification, early amplification, early training of residual hearing and parental intervention that the input for language can be thru the auditory channel for many deaf children.

The last type is of a six-year old deaf girl who has been thru the Home. Her voice resounds with the Tennessee dialect of her mother and her language skills are far superior to most six-year-old deaf children.

PANEL DISCUSSION

Recorder, Mrs. Emily Miller, Bill Wilkerson Hearing
and Speech Center, Nashville, Tenn.

Audrey Simmons, representing Central Institute for the Deaf, gave a brief discussion of Programming *Language Input*; Rollie Houchins, representing Kansas University Medical Center, discussed *Acoustic Input*, as it pertains to his program. Sue Lillie, representing Bill Wilkerson Hearing and Speech Center, gave a brief discussion on *Visual Input*, as it pertains to this program. Copies of their talks will be attached.

Following these presentations, there was a Panel Discussion and Question and Answer session, led by Max Mueller, Office of Education. Participating in the Question and Answer session were: Kathryn B. Horton, Bill Wilkerson Hearing and Speech Center; June Miller, Kansas Medical Center; Mary Tidwell, John Tracy Clinic; Emily Miller, Bill Wilkerson Hearing and Speech Center.

Max Mueller directed the audience's questions toward those pertaining to the setting up of a preschool program. He also asked that they suggest ways that the Office of Education could make this type of information more readily available.

The following encompasses the question and answer session, involving the audience and participants.

Question: How do children get into your program?

Answer: (Dr. Simmons) Many of our children are seen at Children's Hospital and then referred. Some entered the program through parent referral. The local press (St. Louis) has been very helpful in making the public aware of the program. Some have entered the program through medical referral. They are in the process of working with the Head Start program in the city, to try to get at the children in this manner also.

Answer: (Mrs. Lillie) Many of our children come into the program through parent referral and medical referrals.

Mrs. Horton discussed a new 3-phase program being implemented in cooperation with the Health Department. The first phase involves the training of Public Health Nurses to give hearing screening tests to all babies involved in the Well Baby Clinic, sponsored by the Health Department. Under this program, the baby is given a series of hearing tests; if he fails, then he is referred to the Bill Wilkerson Hearing and Speech Center for further evaluation. Phase 2 of the program involves moving directly into the Nashville hospitals, with the trained nursing staff of these hospitals giving the test. Phase 3 will involve the pediatricians giving the test.

Mrs. Tidwell said that the children at John Tracy Clinic were referred by; private physicians, adoption agencies, county health nurses.

Dr. Simmons commented that maybe it is our fault that we do not get these babies earlier because, we as a profession have said that there is nothing that we can do.

Question: How long should children stay in the Home Program? (if we are picking them up so early.)

Answer: (Mrs. Lillie) Our children go into the nursery situation at age 3 years.

Dr. Hollie Houchins commented that they were seriously questioning how long these children should stay in the Home, especially since they were finding that their parents were becoming so dependent upon the Home for support.

Mrs. Lillie responded to Dr. Houchins' statements by saying that next year, the Bill Wilkerson Program is going to try to ease up on their support from their teachers. This will be accomplished by having the parents participate in the Home Program for concentrated work at first, and then as the parent is able, slacking off on the number of times that they come to the Home.

Dr. Simmons commented that at Central Institute for the Deaf, they are most concerned that the 3 to 3½ year old child does not understand or know what communication is. So, they feel that this child needs a more specific program with daily work in the home.

Mrs. Miller commented that at Bill Wilkerson, the parents are encouraged to get their children with normal hearing children as early as possible, into play groups, or other nursery school situations.

Dr. Miller responded to Dr. Simmons' statement by saying that maybe the parents are pushed too hard to become "teachers". Maybe this explains why these children do not understand what communication is.

Question: In the case of parents who cannot come into the Center, what is the recommendation?

Answer: (Mrs. Horton) Families travel great distances from as far as Kentucky, Alabama, Mississippi and Illinois to take part in our program. She said that these families are scheduled with the Home and the Audiologist on the same day, and can come in once a month if this is all that they are able to.

Mrs. Tidwell said that their program sees people who travel great distances also. They come on a monthly basis or can come on a "short-term" basis, i.e., for one to two weeks of concentrated work. For people who cannot come at all of the program, they have the Tracy Correspondence Course.

Dr. Simmons said that for people who live far away, they can come in three times per year for one week each visit if possible. In addition to these visits, a "big sister" is assigned to the family to correspond with, and give further information to the family.

Dr. Mueller commented that some of the problem was not distance, but not knowing about the programs. That is why the Office of Education is making literature available.

Question: Why is a parent-oriented program more valid than a child-oriented program?

Answer: Several members of the panel said that children under four should not be separated from the parent. It was also stated that it is the parent that is with the child the majority of the day.

Question: After a child leaves the preschool program, is school-age time to go to manual or sign language programs?

Dr. Mueller commented that the age of three is generally too late to capitalize on residual hearing. He asked the panel—Do the graduates of the "Home" programs show a difference?

Dr. Simmons said that 70 of CID's children integrated into public school classes, they were severely deaf, only two had profound losses, moderate losses went to a preschool level.

Mrs. Lillie: One child integrated last year into regular 1st grade class; nine this year with resource teacher.

Dr. Houchins: A range of things occurred. Numbers not important, it is the degree of improvement that counts.

Mrs. Horton: All programs have, and have had, to change. We changed our preschool when these children were three. Now at age six the public school choices had to be improved and changed.

Dr. Miller: Changes are individual; we work also with multiply handicapped; each goal is different. Formerly we had no one in preschools; now we have three. We are following these children carefully on an individual basis.

Question: Who will fund the Resource Teacher?

Answer: Mrs. Lillie, The Metropolitan Board of Education will be responsible for this within the Nashville-Davidson County area.

ACOUSTIC INPUT

Rollie R. Houchins, Ph. D., Associate Professor, Audiology Hearing and Speech Department, University of Kansas Medical Center

Auditory training is the label we frequently use when referring to the process of teaching listening skills to hearing impaired children. Listening is a complex process. It is more than just being aware of sound; it means interpreting sound and attaching meaning to it. Listening is a skill acquired through meaningful learning.

In order for listening skills to be learned the child must be provided with meaningful practice on a daily basis. Because he has his hearing aid on and/or the head sets on does not insure that he is learning to listen. As a matter of fact, if he is not taught to listen, he may be learning to ignore or inhibit responses to amplified sound.

A multi-sensory approach to teaching auditory training may not be the most functional way to acquire listening skills. An example of this occurs as you adjust a child's amplifying device. As you say in full view of him, "Do you hear me?" and the child probably says "yes." What the child is in reality responding to is "Yes, I saw you say, 'Do you hear me'." In some of the auditory training literature, we are reminded that sense modalities are not compartmentalized, however, one modality may dominate the process. If we are going to teach listening skills, it must be an auditory process.

In teaching this process, initially the child should be taught the task visually. More specifically he should have the experience of associating an object visually with the sound that the object produces. He also has to be taught how to respond. In other words, when you hear something, how do you react? For example, this phase of auditory training can be carried out at home by mom and dad. A technique that we have used in our program has been one which we have taught the parents to identify the sound and the sound in the child's environment. Parents have been instructed to point to their own ear immediately upon hearing a sound the child possibly hears; for example, a door slamming or a lid dropping on the floor, or any of the common noises that occur around the house. In a metropolitan area, airplanes are a frequent source of early environmental sound training. In the early stages, this game of identifying and pointing out the source of sound may be just a game, however, it provides the experience for the visual training which appears to be necessary, and also provides the setting for teaching the child to respond.

Another way in which the parents were instructed to provide auditory input is in the countless times a very young child is handled physically, the parents may do a great deal of verbalizing ad concham. The parent is instructed to "coo" and "babble" in the child's ear, which is in a position close to his mouth. The child learns to associate the parent's physical proximity with the auditory stimulation which he also feels since he is held to the parent's chest. When the child vocalizes, the parent is taught to respond with a pointing to the ear, saying, "I hear you." A very important variable to keep in mind is the fact that at these very early ages, from up to about two years of age, audiograms are not too stable, however, with the suggestions made for alerting the child to sound, even the profoundly impaired individual can be involved in this activity. Much of the sounds that are recommended are vibrotactile in nature, and at least alert the child to sound.

The auditory training process which we work toward in our program is one in which we always attempt to teach visually that there is sound in the environment and how to respond to sound. At this point, we are not at all concerned about whether or not he really hears or does not hear. We are not concerned about the quality of what he is hearing. We are attempting to set up a system of communication that says between child and teacher, "Yes, I am aware of sound," or "No, I do not hear." After this orientation and method of responding has been established, then on a consistent basis, one applies an auditory stimulus through a bi-modal presentation—both visually and auditorially. As the child reaches a level of criteria for responding, in this particular manner, then the visual stimulus is gradually faded. When the task is an auditory-only-type task, then, and only then, do we know how well the child uses his residual hearing.

Once again, referring back to the situation in which the parent introduces sound to the child, we follow this up by saying that when the child has developed awareness and an auditory identification of common household sounds, then the parent can produce the sound without a visual clue and have the child find it. In this manner we attempt to help the parent isolate what the child can hear and cannot hear as far as common household objects are concerned.

We must keep in mind that at this age level (0-3) the child spends most of his waking hours at home with a parent. Developing an awareness to sound and teaching simple auditory discrimination can be facilitated by, and in some instances taught by, the parent in the environment where the preschooler is most comfortable—at home.

The techniques for teaching a child beginning listening skills are essentially the same format regardless of whether the educational setting is at home, in the clinic, or in the classroom. Sound is identified for the child visually, i.e. a stimulus is produced and the source of the sound is matched up to the sound. At this point the child is taught how to respond, i.e. by pointing to his own ear or the source of the sound.

The stimulus is presented visually and auditorially until the child is able to respond constantly; then the visual clues are faded until the task is purely an auditory task.

MATHEMATICS—UPPER SCHOOL LIBRARY

10:30 a.m.-4:00 p.m.: Mathematics—Upper School Library; *Chairman:* John Kubis, Mathematics Department, National Technical Institute for the Deaf; *Recorder:* Bruce Godsave, Gallaudet College.

10:30 a.m.: "*Ideas or Classroom Strategies*," Leon Auerbach, Gallaudet College.

11:15 a.m.: "*An Introduction to the Geoboard*," Bruce Godsave, Gallaudet College.

1:30 p.m.: "*Putting Mathematics to Work*," Bob Klafehn, National Technical Institute for the Deaf.

2:30 p.m.: "*The Metamorphosis of High School Math in a School for the Deaf, or 30-Years of High School Math at the Indiana School for the Deaf*," Norman Brown, Indiana School for the Deaf.

3:30 p.m.: "*Uses of Computer Assisted Instruction in the Teaching of Mathematics*," Dr. O. Dennis Barnes, National Technical Institute for the Deaf.

IDEAS or CLASSROOM STRATEGIES

Leon Auerbach, M. S.,
Chairman, Department of Mathematics,
Gallaudet College

As most of you are aware, the "new math" is really nothing but a new technique in teaching what was formerly a dull subject. So far, according to current reports, this new technique has produced miraculous results in the nation's public schools but our annual entrance examinations at Gallaudet, although they do show a gain in norms, are nothing like "miraculous results." Is it because of many of our mathematic teachers still teach the old and conventional way? That is another matter. I am in favor of new mathematics. However, we should not go overboard and imagine miraculous results are always to be expected. The main trouble with the archaic way of teaching mathematics is that it is being taught by more or less rote methods. The children are as bored as they were fifty years ago, if not more so. Children often say that the topics they come across in the course seem to be of little value to them in their later life. Mathematics is important to most activities of the modern world but aside from that it has its own beauty. Mathematics has its own appeal to those who are willing to look into the subject. Anyway, the new mathematics does bring in something new. This is in getting the children involved in problem solving and classroom activities. That is what I call strategy in the classroom. As Tom Lehrer said in his "The New Math":....

"in the new approach, as you know, the important thing is to understand what you are doing, rather than to get the right answer." It is arranged so that the child's curiosity is aroused by a ruse on the teacher's part, such as introducing him to something never dreamed of, never seen or thought of by the child before. The child is induced or led to search for the pattern, rule, or whatever the problem calls for. A famous mathematician at the University of Chicago, G. H. Hardy, has said: "A mathematician, like a painter or a poet, is a maker of patterns. If his patterns are more permanent than theirs, it is because they are made with ideas."

So, for my talk, I will discuss the various examples of strategies with you. The children will surely come up with ideas and this means that the less the teacher says, the better for the children. I will share with you ideas and suggestions which have appeared here and there in various textbooks as well as in mathematical journals.

We have a circle here. Let us draw a chord (a straight line joining any two points on the circle). There are two regions here. Now let us draw another chord intersecting the first chord. We now have four regions. We now draw a third chord intersecting the two chords in different places. How many regions do we have here? Seven. Let us write it down:

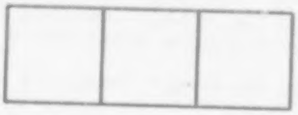
Lines	Regions
1	2
2	4
3	7
4	11

Let us draw fourth, fifth chords and so on. Then see if we can find a pattern for predicting the number of regions. Five chords produce 16 regions. Six chords give 22 regions. How many regions will seven chords produce? Eight chords? Are you ready to set up a pattern or rule? When we draw one line we have 2 regions, and two lines give four regions, three lines seven regions, and so on. A bright child may come up with a kind of rule saying that when you add a line, you add one to the difference between the number of regions produced by two successive numbers. That is, when you draw two lines, you add two; three lines you add 3; four lines you add 4; five lines you add 5; and so on. How many regions will seven lines produce?

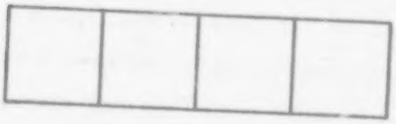
Now I will show an example which I quote from IDEAS, a regular feature in the "Arithmetic Teacher". IDEAS is a method of introducing mathematical concepts to students by the students' own activities. This one is appropriate for beginning classes. Let us take this example; a set of squares:

Directions: To put one bean in the first square, two beans in the second square, three beans in the third square, how many beans will it take for each set of squares?

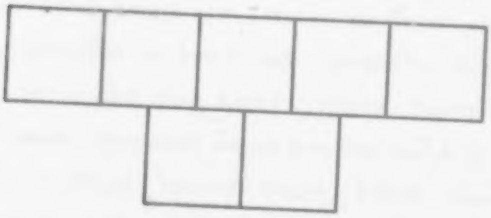
A.



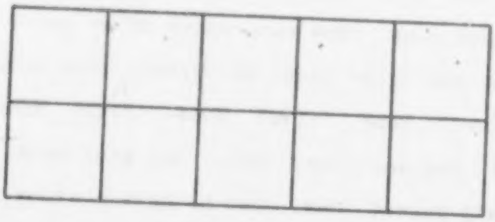
B.



C.



D.



You can change the rules and develop many other experiences. Some examples are:

1. Put 1 bean in the first square, 3 in the next, 5 in the next, and so on.

2. How many beans would you need to put 10 in the first, 20 in the second, and 30 in the third until all the

squares are counted?

3. Put 1 bean in the first square, 2 in the second, 4 in the third, doubling the number of beans in the next square until there are beans in each square.

If you encourage them, the students will often suggest rules of their own that other students can try.

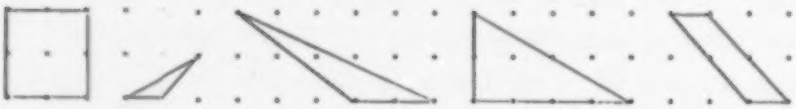
Let us try this, a well known strategy which can develop into many new "ideas". We have a block, or call it a cube. Paint the outer faces red (or black, if you wish). We say that only one has its six faces painted. Now let us have a block of cubes. Two cubes on each edge. How many cubes do we have? Eight. Paint only the outer faces. How many cubes will have all six faces painted? None. How many with five? None. Four? None. Three? Eight.

Let us proceed further and have a block of three cubes on each edge. How many cubes do we have? Twenty-seven. Paint the outer faces as before. How many with six faces painted? None. Five? None. Four? None. Three? Eight. Two? Twelve. One? Six. How many cubes are left unpainted on all faces? One. Let us have a block of four cubes on each edge. How many cubes in all? Sixty-four. How many with two faces painted? Let us have a table like this:

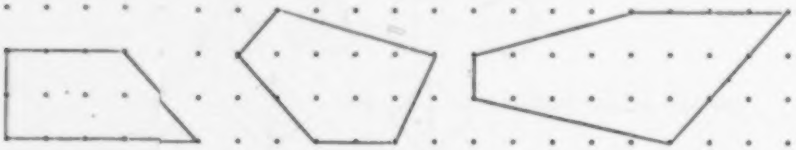
No. of cubes on each edge	No. of cubes	Three cubes painted	2	1	0	Total
2	8	8	0	0	0	8
3	27	8	12	6	1	27
4	64	8	24	24	8	64
5	125	8	54	27	27	125

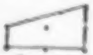
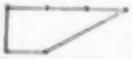
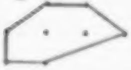
We can make up rules for each category. We have many opportunities here. For instance, what is the rule for number of cubes? What is the rule for the number of cubes with only two faces painted? What is the rule for the number of cubes with only one face painted? No faces painted? The total number should be equal to the sum of cubes in all categories.

Let us take this, a very versatile tool. That is: the geoboard. It affords a mountain of strategies. I will touch only on one of them. Use rubber bands of different colors on the board in various ways. First let us stretch a rubber band between two pegs. It makes a line segment. Stretching a band around three or more pegs will form many shapes. How many squares of different sizes can you make on the geoboard? The area enclosed with the smallest square is one-half of that of the unit square. We can put up different shapes such as these:



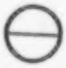
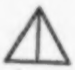
We can calculate ares of the figures. Suppose we take various figures such as these:



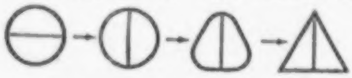
We can calculate areas of the above figures. Can we set up a rule for determination of areas without actually counting the unit squares and count instead the number of pegs? We will count the pegs on the figure as well as those within or inside the figure. For  the area is 3. The number of pegs on the figure is 6 and there is one inside. Try another simple figure  whose area is 2. There are 6 pegs on the figure but none inside. Ready to set up a rule? Let $\underline{k}$ be the number of pegs on the figure and $\underline{m}$ be the number of pegs within the figure. How about this: $\frac{k - 2}{2} + m$? Try this on the above figures. Also try this on 

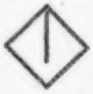
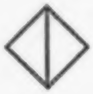
You can easily make a geoboard yourself. Use a 3/4" plywood square and nail down 5 pegs on each side, using carpet nails (decorative type). Or you can purchase one which is readily available on the market.

Now let us delve a bit into the elevated world of topology. If two figures can be twisted and stretched into the same shape without connecting or disconnecting any points, they are said to be topologically equivalent.

 and 

are topologically equivalent since



On the other hand  and .

are not topologically equivalent, because two points of the first figure would have to be joined in order to get the second figure.

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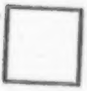
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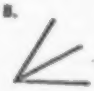
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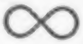
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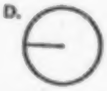
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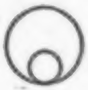

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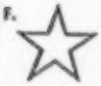
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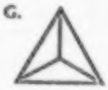
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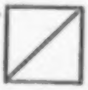
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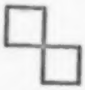
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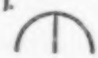

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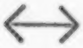
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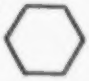
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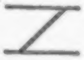
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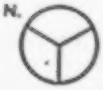
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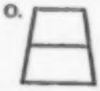
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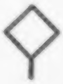
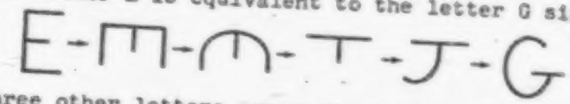


Let us study the above figures. Figure A is a square but the fact that it has 4 corners is not important in topology. Think of it as being made up of a rubber band and you can see that it is twisted and stretched into the shape of a circle, it wouldn't have any corners at all. Why is Figure A topologically equivalent to Figure F? Figures A and F are topologically equivalent to a third figure. Which one is it? Figure B can be twisted and stretched into another figure shown. Which one? Figure C is topologically equivalent to two other figures shown. Which are they? (Hint: notice that Figure C consists of 2 loops that are joined at one point.)

Try the letters of our alphabet. Use capital form only. The simplest letter is the capital I, since it is merely a line. A line can be twisted into all sorts of shapes, and this letter is topologically equivalent to quite a number of other letters; in fact, 10 in all. Which letters are they? Only one letter is equivalent to the letter O. Which one?

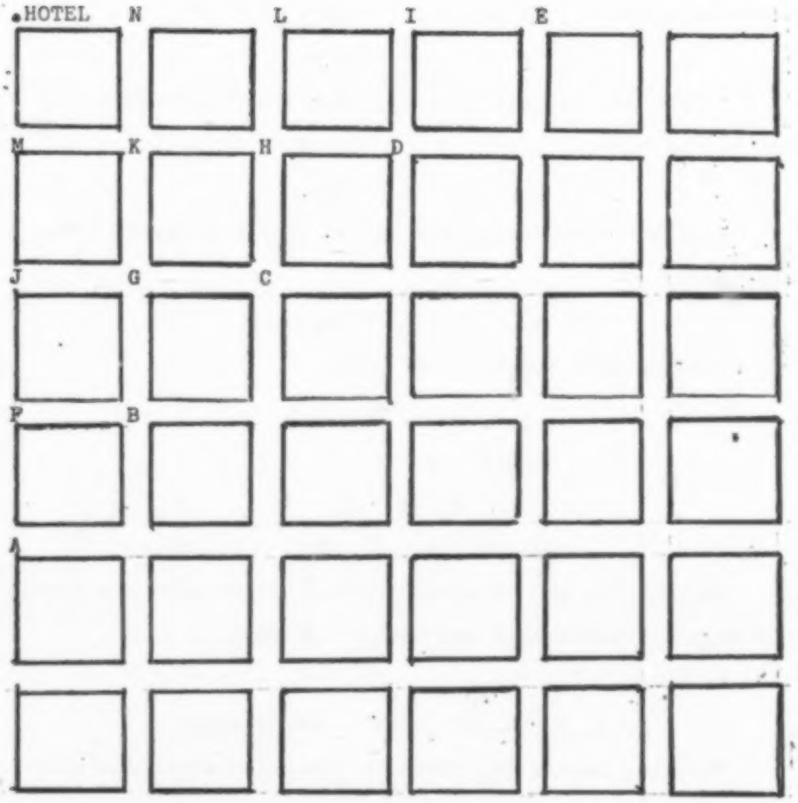
ABCDEFGHIJKLMN
OPQRSTUVWXYZ

The letter E is equivalent to the letter G since



Three other letters are equivalent to the letters E and G. Which are they?

After sightseeing in Little Rock, you find yourself at a corner, say 4 blocks from your hotel. Naturally, you will want to walk four blocks and no more. Is there more than one way to get to the hotel? If so, what are they? It all depends on where you are. Let us draw a diagram of city blocks:



If you are at point A or point E, there is only one way to get to your hotel, but if you are at point B or point D, there are four ways. If you are at point C, there are six ways to reach your hotel. We can represent A, B, C, D, and E by this:

1 4 6 4 1 or a total of 16 ways.

Suppose you are three blocks away from the hotel. That would be points F, G, H and I. Here we can write:

1 3 3 1 or 8 ways.

If you are two blocks away, that would be points J, K, and L. We have

1 2 1 or 4 ways.

Similarly, for being one block, points M and N, from your hotel:

1 1 or 2 ways.

Putting this together, we have:

1 1	2
1 2 1	4
1 3 3 1	8
1 4 6 4 1	16

Suppose you are at a corner five blocks from the hotel, How many different ways are there? 32 ways.

We have:

1 5 10 10 5 1 or 32 ways.

This is, naturally, Pascal's Triangle, which has many applications in mathematics. We can write another row for six blocks:

1 6 15 20 15 6 1 or 64 ways.

I believe I have introduced enough examples to you in order for you to use them for your own classrooms yourselves. I want you to know that the students are often brighter and sharper than you may have been led to believe. To illustrate this, I will show you this transparency, the one of our good friend, Charlie Brown.

LIST OF REFERENCES

Immerzeel, George, and Wiederanders, Donald, "IDEAS". *The Arithmetic Teacher*, Vol. 18, No. 2, February, 1971

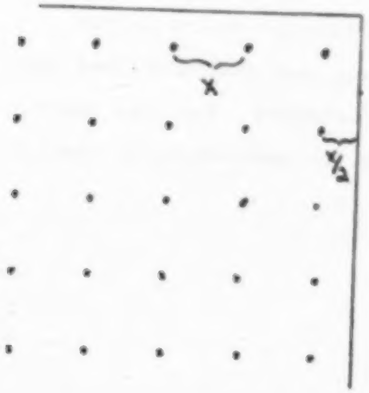
Jacobs, Harold R., "*Mathematics, A Human Endeavor*" W. H. Freeman and Co., 1970

AN INTRODUCTION TO THE GEOBOARD

Bruce F. Godsave, M.S. in Ed., Gallaudet College

What we will do this morning will cover perhaps six or more years of a students life. The device we'll use is called a Geoboard and it's easily made out of a piece of wood and some nails. Rubber bands are then added to give it life. The only requirements for construction are these:

1. it must be square,
2. it should have a bo~~a~~rder which is 1/2 the measure between the pegs. This will allow you to put 2 or more geoboards together,
3. the pegs must be evenly spaced.



Basic pattern for a geoboard.

I would also recommend that you have a minimum of five rows and columns.

If the thought of construction frightens you, the Cuisinaire Company of America has them already made and they'd be happy to have your business.

Now what do you do with this Geoboard? To begin with, play with it. Count the rows, or columns, or the individual pegs, stretch rubber bands all over it and make designs, put balls of clay on the pegs, try floating it in water; just become familiar with it. Let your students do the same, just become familiar with it. After they have played with it you can then introduce activities on it. Your imagination and an individual with a difficulty should be sufficient for you to come up with a new activity.

I'd like to show you some activities that can be done very easily on the Geoboard. Before I do, I think it only fair to you to say that part of my philosophy of teaching is based on the student actively participating in the learning process. I also believe that individualized rates of learning should always be considered. For this reason most of the activities here are for individuals or small groups.

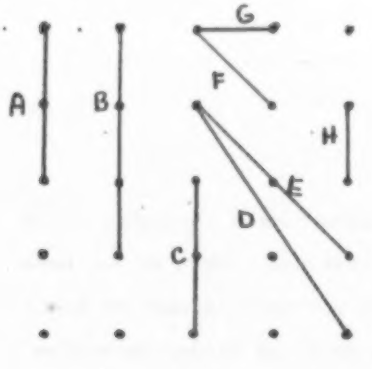
SOME COUNTING ACTIVITIES

The obvious questions are:

How many nails are there?, How many rows are there?,
How many columns are there?

Now stretch a rubber band around some nails and ask:

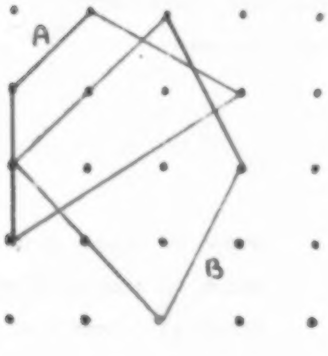
How many nails are inside?
How many nails are outside?
How many nails are touching the rubber band?
Which has fewer nails, the inside, or outside?
Which has the fewest nails, the inside, outside or those touching the rubber band?
Can you see the opportunity for teaching vocabulary?
Now by changing the rubber bands we can ask:
Which is longer(shorter)?



Which is longer A or B?
Which is shorter C or H?
Which is longer F or G?
Why? Can you 'prove' which one is longer?

Those which are not neatly lined up or parallel to one of the sides might pose a problem. This would give you a chance, only after the student has struggled and explained their reasoning behind their answers, to introduce the straight edge or some other instrument for measuring.

How many is 3 plus 4? Make a region with 3 pins inside, then make another region with 4 pins inside, now count. Seems easy but wait until some smart kid does this to you.



3 plus 4 is 5!!!!
oops!

He adds 4 and 3 and gets any number from 4 through 7. I'd like to hear you weasel out of that one. What we see here is a very real problem. Suppose you're told that in a class a vote was taken to decide what to do on Friday afternoon and the results of the vote were:

4 people wanted to do art,

3 people wanted to have a picnic.

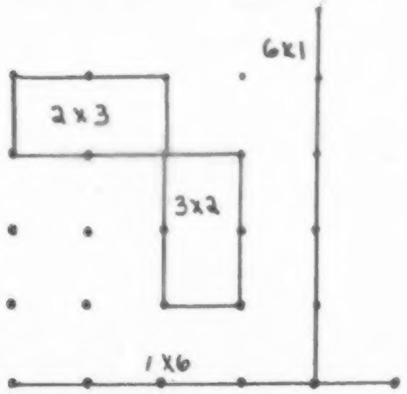
Now the question is, How many people are in the class? The best answer we can give is between 4 and 7 since the one man one vote philosophy does not always hold true in the elementary school. Students tend not to vote for things they don't like but will often vote for more than one thing if they like more than one thing.

Now we've touched on logic and human behavior and if you think you won't have to work with vocabulary to get out of that then....

Before we leave counting I just want to mention multiplication. You might find it easier on yourself to change your questioning to:

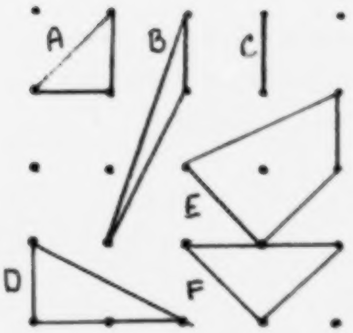
How many pins are inside or touching the rubber band?

How many ways can you get 6 pins inside or touching a rubber band where the shape will be a rectangle?

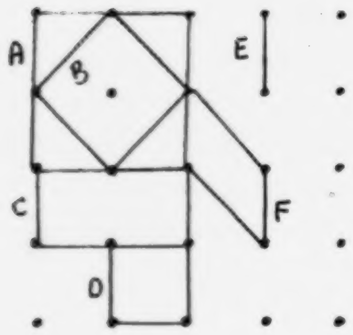


NAMING GEOMETRIC SHAPES

There are as many ways of doing this as there are teachers. John Trivett in his Geoboard Activities Card Kit jumps right into it by defining a triangle. This brings up a very good point. Many, I should say most, of the things in mathematics were not given to us at birth and even those of us who are Catholic did not receive them from the Holy Ghost in Confirmation. Most of mathematics is based on definitions and so at some point they must be given. When the child is asked to make a triangle he should be told "yes that is" or "no that is not" a triangle. The reinforcement is vital at the beginning.



Which of these shapes are triangles?
Is a triangle something that touches only three pins?
What about D?



Which of these shapes are rectangles; squares; polygons? On your Geoboard make some triangles; rectangles; parallelograms; polygons.

You could then do the same for various triangles; right, isosceles, scalene, obtuse, equilateral, etc. Then move on to 5-gons, 6-gons, and on up.

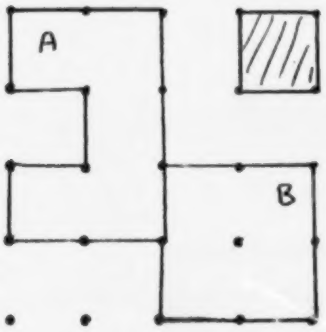
MEASUREMENT - LINEAR/PERIMETER

After working with the Geoboard for some time you could begin asking, How long is this line? Right now this is a meaningless question. First we must define some unit of measure. Let's call the distance from one pin to another pin in the same row or column, one unit. Now we can count. We can also find the perimeter of rectangles parallel to the edges of the Geoboard.

Is the measure diagonally still one unit? No, if we use a straight edge we would see that it is not. We need more information before we can find out how long it is,

MEASUREMENT - AREA

Again we must define our unit of measure, and again it is good for the students to count to be sure their answers are correct or to simply find the answer. We will define the square region between four pins to be one square unit. We'll use little pieces of paper to cover these squares in finding or checking our answers.



▨ is defined as 1 square unit.

A is ______ square units.

B is ____________________.

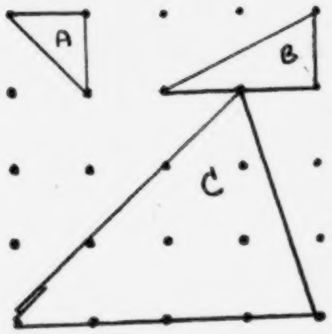
At first they are easy. Always be sure the answers are given correctly. For example:

A is 5 square units.

B is 4 square units.

A and B are a total of 9 square units.

Now let's find the number of square units in this.



What is the area of A? _______

What is the area of B? _______

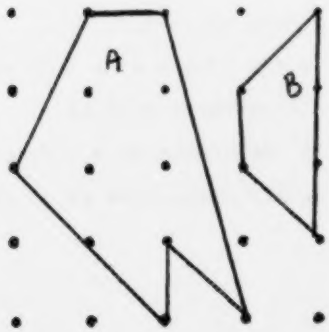
Can you make a region that looks like A and B but has area of 3 square units?

Show me.

Find the area of C.

If we use pieces of paper then it should be a little easier. It so happens that we are now beginning some work with fractions.

It's always good to have the students make "graphs". I use the term graph very loosely. We will consider a pictorial representation of what we've done as a graph. In the same way that these overlays are representations of what was done on the Geoboard. In this way the studnets have a record of what they've done.



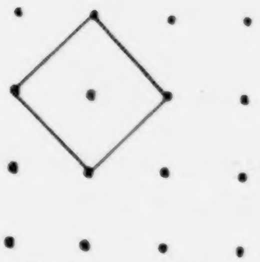
Find the area of polygon A.

Find the area of polygon B.

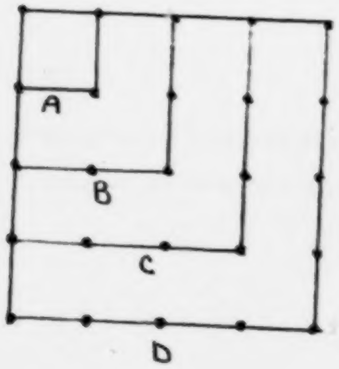
With the half unit we can find the area of many more polygons.

SQUARE ROOT

Let me build a very simple figure for you. I'll use half area units.



We'll try to develop a way of describing its measure so that we have a square,which is meaningful to the child. First of all we see that we have a square, so the measure we are looking for is the length of a side of a square. If we begin with something we know, perhaps that would help.



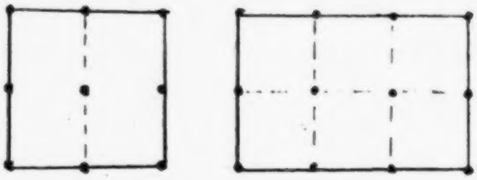
A is the length of a side of a square whose area is 1.
B is the length of a side of a square whose area is 4.
C is the length of a side of a square whose area is 9. etc.

Therefore for our problem we can say that the measure is the length of the side of a square whose area is 2. Now those of you who are mathematicians will now that what we're really talking about is the square root of 2, but don't throw that at the kids all at once.

Can you build a square which will have an area of 3?

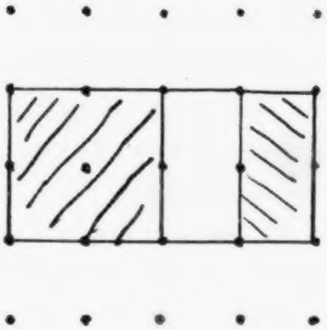
FRACTIONS

Let me begin with these two regions.



Can we divide them in half? Let's look at the different ways we can divide them in half. Can we divide both of them into thirds? No! We can divide the second one into thirds but not the first.

Now suppose I want to add 1/2 and 1/3. To get the answer I would not use A as an aid because I can't divide it into thirds. I can show halves and thirds on B so that will be my model. All I need do now is count.



Find 1/2 + 3/4.

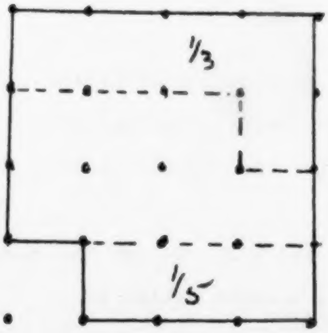
/// is halves.

\\\ is fourths.

By counting I see that

1/2 + 3/4 is 5/4.

Now given a problem of addition of fractions I must hunt for a model that can be divided into the value of each of my denominators, then to get the answer all I need do is count. Let's look at another example.



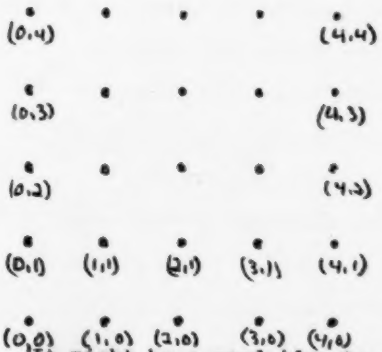
Find 3/5 + 1/3.

The student will have to experiment until he finds a shape that can work for each problem. Try 3/5 + 1/3.

Eventually the student will learn the idea of a common divisor and it will have more meaning for him if he's found it out for himself or if he was told about it after a real hard attempt of working fractions without it.

COORDINATE SYSTEM

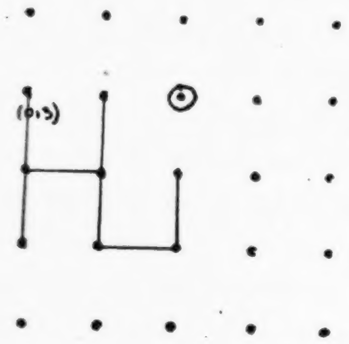
The last thing I want to discuss today is the coordinate system. Again definitions are important and things like point, ordered pair, how we write points and such things must be defined. By using the Geoboard we can provide the much needed play experience which is important in becoming familiar with the coordinate system. On the Geoboard the coordinate system would look like this.



The Coordinate System

It might be a good idea to actually write those ordered pairs on the board at the beginning.

To get that much needed practice in naming and finding points there are several things you can do. "Follow the dots" can be interesting. For example, ask the students to do the following.



Connect these points in this order:
(0,3)→(0,1)→(0,2)→(1,2)→
(1,3)→(1,1)→(2,1)→(2,2).
(2,3) °

Now let them make up ones by themselves. You and your students can do better than I did. Games played with other kids are fun and also provide for creative play. A couple such games I've had dittoed for anyone who might be interested. There from an article of mine which was printed in the May '71 issue of The Arithmetic Teacher. Please come up and take one if your interested.

Today I have only touched upon some of the many activities you can do with a Geoboard. These activities ranged from preschool through junior high. I did not discuss transformations, working with circles, kites, congruence, similarity, number sentences, number patterns, intersections, tiling, symmetry or several other topics which can be handled very nicly on the Geoboard.

I've also brought a short bibliography of references to the Geoboard and lists of Companies and prices of materials which can and are being used with the Geoboard. Why not give it a whirl.

PUTTING MATHEMATICS TO WORK

Robert N. Klafehn, B.S., M.S., Chairman, Engineering Technologies Department, National Technical Institute for the Deaf

"Why do I need to know that, I'll never use it." is a statement students say many times and the instructor usually replies, "Well—just because!"

At the National Technical Institute for the Deaf at Rochester Institute of Technology this same statement is asked by students in the various programs in the Engineering Technologies Department. Fortunately, however, the instructor's reply is, "You will need it to use on the job". This is not to say we have convinced the student. However, it is a real fact which certainly justifies the teaching of mathametics as it directly relates to the job.

Within the Engineering Technologies Department at NTID there are five general areas that a student may major in. They are: Drafting, Electronics, Machine Tool Operation, Civil Technology, and Architectural Technology. Using these five areas of study it can be readily seen how mathematics is used to solve problems that the student will encounter on the job.

MACHINE TOOL OPERATION

A machinist must know how to set-up a job on a lathe and to be able to start and operate the machine. In addition to these requirements he must know how to maneuver the machine to create a finished product.

To create a finished product requires a knowledge of the machinability of various metals, which in turn demands a knowledge of mathematics used to set the speed of the lathe, depth of the cutting tool and the time it will take to make a cut. Because time affects cost it is most important to produce a product to acceptable standards in the least amount of time.

The following is a typical problem found in the machine tool program at NTID.

Problem

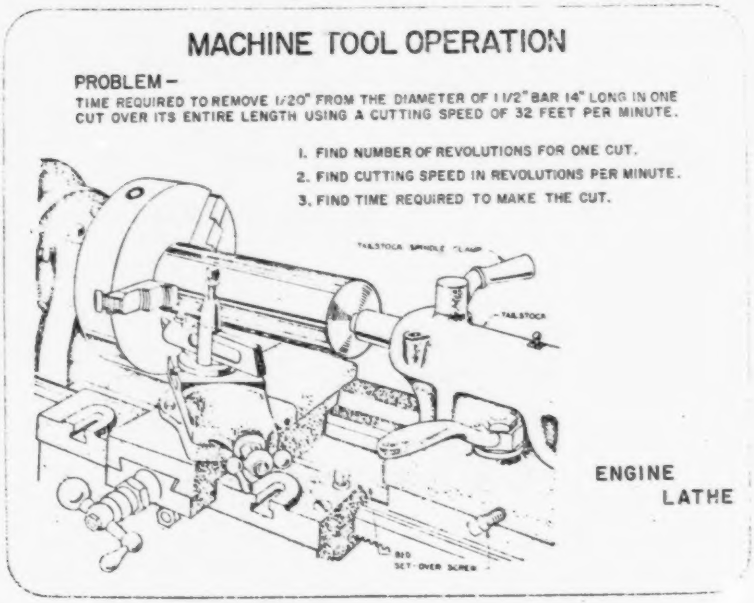
Find the time required to remove 1/29″ from the diameter of a 1½″ bar 14″ long in one cut over its entire length using a cutting speed of 32 feet per minute.

The steps for solving this problem are:

(1) Find the number of revolution for one cut.
(2) Find the cutting speed in revolutions per minute.
(3) Find the time required to make the cut.

The calculations needed for the job are outlined in the illustration. The answer to the problem being 3⅓ minutes to make the cut in carbon tool steel.

Although this machining problem does not require in-depth knowledge of mathematics it does require the understanding of the relationship of diameter and length of stock, cutting speeds of feet per minute, revolutions per minute to obtain a result in minutes of time.



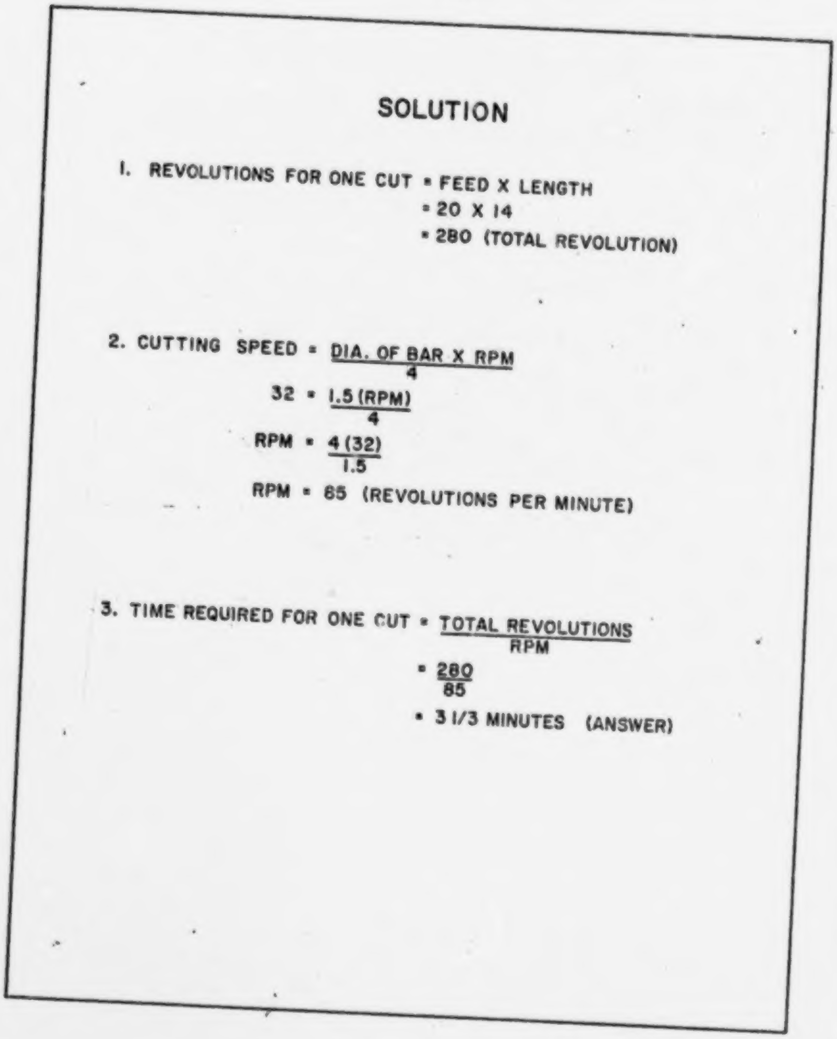
MACHINE TOOL OPERATION

PROBLEM –

TIME REQUIRED TO REMOVE 1/20" FROM THE DIAMETER OF 1 1/2" BAR 14" LONG IN ONE CUT OVER ITS ENTIRE LENGTH USING A CUTTING SPEED OF 32 FEET PER MINUTE.

1. FIND NUMBER OF REVOLUTIONS FOR ONE CUT.
2. FIND CUTTING SPEED IN REVOLUTIONS PER MINUTE.
3. FIND TIME REQUIRED TO MAKE THE CUT.

ENGINE LATHE



SOLUTION

1. REVOLUTIONS FOR ONE CUT = FEED X LENGTH

$$= 20 \times 14$$

$$= 280 \text{ (TOTAL REVOLUTION)}$$

2. CUTTING SPEED = $\dfrac{\text{DIA. OF BAR X RPM}}{4}$

$$32 = \frac{1.5\,(\text{RPM})}{4}$$

$$\text{RPM} = \frac{4\,(32)}{1.5}$$

$$\text{RPM} = 85 \text{ (REVOLUTIONS PER MINUTE)}$$

3. TIME REQUIRED FOR ONE CUT = $\dfrac{\text{TOTAL REVOLUTIONS}}{\text{RPM}}$

$$= \frac{280}{85}$$

$$= 3\,1/3 \text{ MINUTES} \quad \text{(ANSWER)}$$

INDUSTRIAL DRAFTING

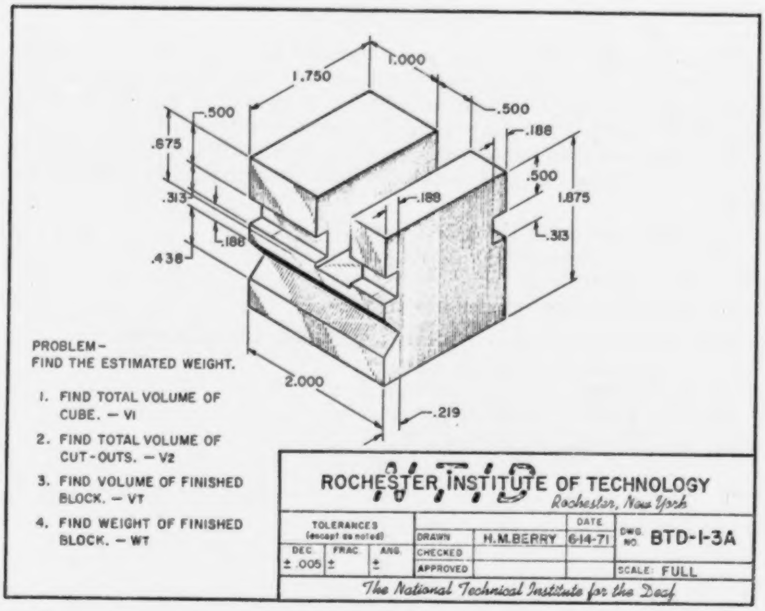
Many industrial draftsmen are requested to determine the weight of the object they are drawing for purposes of cost analysis. In the Industrial Drafting Program at NTID the student is required to solve this problem as part of the preparation for a draftsman's job.

A typical problem presented to a student would be to find the estimated weight of a block of metal. To solve the problem it is needed to find:

(1) Total volume of the cube (V_1).
(2) Total volume of the cutouts (V_2).
(3) Volume of the finished block (V_T).
(4) Weight of the finished block (W_T).

The calculations needed to solve the problem are as follows:

(1) $V=LWH$; 6.563 cu. in. (V_1).
(2) $V=LWH$; 0.950 cu. in. (V_2).
(3) $V_1-V_2=V_T$; 5.613 cu. in. (V_T).
(4) $V_T(K)=W_T$; 1.588 lbs. (W_T).



PROBLEM –
FIND THE ESTIMATED WEIGHT.

1. FIND TOTAL VOLUME OF CUBE. – V1
2. FIND TOTAL VOLUME OF CUT-OUTS. – V2
3. FIND VOLUME OF FINISHED BLOCK. – VT
4. FIND WEIGHT OF FINISHED BLOCK. – WT

Electronics

Of the occupational areas presented, the Electronics program at NTID is probably the most demanding in the knowledge of mathematics. It requires the student to understand theory and concepts that become difficult to transfer into a hands-on experience. Even the seemingly simplest of circuits can become a complex mathematical problem to the student.

A problem that can have direct industrial application is to design a blinking warning light to indicate equipment breakdown.

Problem

Design a neon relaxation oscillator that can be used as a blinking pilot lamp on a piece of electronic equipment. It should flash on and off approximately once every second.

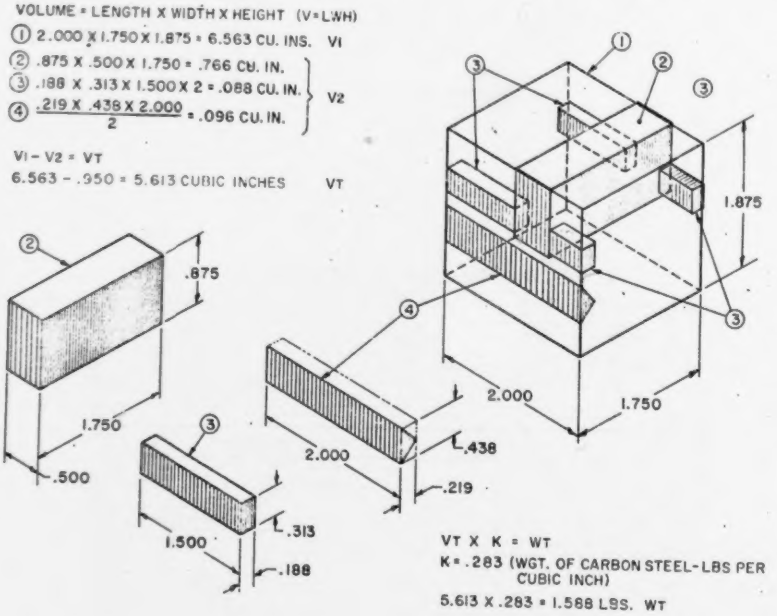
Given conditions

The lamp must operate on 100 volts D.C.

Figure 1 shows the schematic of the electrical circuit involving the switch, resistor, capacitor, and neon bulb. In this circuit the neon bulb represents an open circuit until the voltage across it reaches 60 volts. When the voltage across the neon bulb is 60 volts, the gas in the bulb "ionizes" and the lamp lights. The capacitor will charge through the resistor until the voltage across the capacitor reaches 60 volts, at which point the neon lamp will light. When this happens, the conducting neon lamp becomes a low resistance and the voltage across the capacitor and the lamp will almost instantly drop to a value of 50 volts, which is the "deionizing" potential of the neon bulb. The lamp becomes an open circuit again and the entire process is repeated. A sawtooth waveform is generated, as illustrated in Figure 2. This wave form is determined by the formula

$$Vc=E\left(1-e\frac{-t}{RC}\right)$$

It is apparent that to calculate the simple on-off flashing of a bulb requires understanding of concepts and use of mathematical formulas. These formulas and concepts once understood become the tools of the electonics technician in solving the designing of circuits.



VOLUME = LENGTH X WIDTH X HEIGHT (V=LWH)
① 2.000 X 1.750 X 1.875 = 6.563 CU. INS. V1
② .875 X .500 X 1.750 = .766 CU. IN.
③ .188 X .313 X 1.500 X 2 = .088 CU. IN.
④ $\frac{.219 \times .438 \times 2.000}{2}$ = .096 CU. IN.
} V2

V1 − V2 = VT
6.563 − .950 = 5.613 CUBIC INCHES VT

VT X K = WT
K = .283 (WGT. OF CARBON STEEL-LBS PER CUBIC INCH)
5.613 X .283 = 1.588 LBS. WT

ELECTRONICS

PROBLEM:

DESIGN A NEON RELAXATION OSCILLATOR THAT CAN BE USED AS A BLINKING PILOT LAMP ON A PIECE OF ELECTRONIC EQUIPMENT. IT SHOULD FLASH ON AND OFF APPROXIMATELY ONCE EVERY SECOND.

GIVEN CONDITIONS:

IT SHOULD OPERATE ON 100 VOLTS D.C.

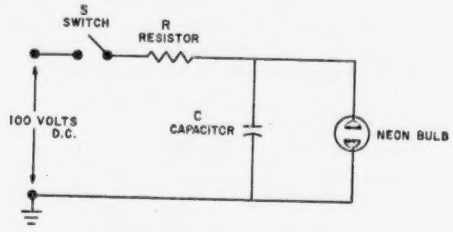
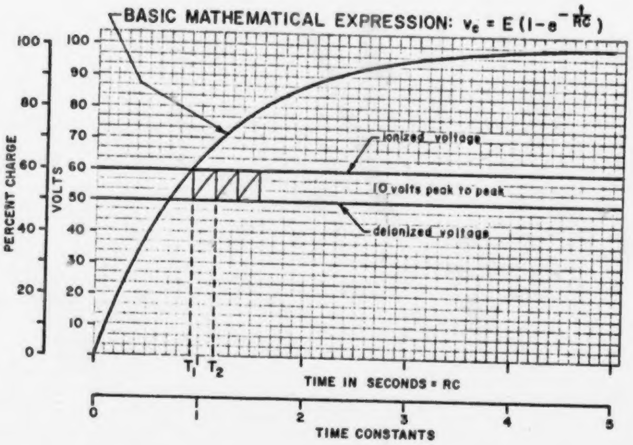


FIGURE I

NEON BULB CHARACTERISTICS: 60 VOLTS IONIZING VOLTAGE
50 VOLTS DEIONIZING VOLTAGE



EXPONENTIAL VOLTAGE CURVE FOR CAPACITOR ON CHARGE
(FIGURE 2)

THE AVERAGE VALUE OF $T_2 - T_1$ IS APPROXIMATELY 25% OF ONE TIME CONSTANT. FROM FIGURE I, THE PRODUCT OF R X C IS EQUAL TO ONE TIME CONSTANT. TO ENSURE THAT THE BULB FLASHES APPROXIMATELY ONCE EVERY SECOND, ONE TIME CONSTANT MUST EQUAL FOUR TIMES THE FLASHING RATE.

THEREFORE:

R X C = 4 SECONDS

Civil Technology

As a part of the Civil Technology Program a student must know how to do surveying. Once the student has learned how to use the various pieces of equipment needed for surveying he must perform actual surveying jobs using this equipment. In addition to using the equipment he must know the mathematics to successfully do the calculations to perform the surveying task.

An actual problem on the RIT campus was to determine the height of an antenna located on top of a building. To do this surveying problem the student needs to know the following mathematics:

(1) Measure in tenths of a foot.
(2) Measure angles in degrees, minutes, and seconds.
(3) To calculate the number of degrees in a triangle.
(4) How to use the Law of Sines to determine the length of a side in a triangle.
(5) How to use trigonometry functions in a right triangle.

To solve the problem the surveyor needs to proceed in predetermined steps.[1]

Step:

(1) Lay off and measure distance AB.
(2) Using a transit measure angles BAT, and ABT, and find angle AT, B.
(3) Using the Law of Sines, find distance AT.
(4) Using the transit, measure angle T, AT_2.

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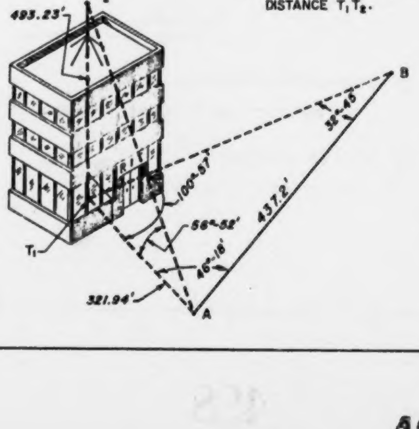
[1] The problem does not include the important calculations of determining the height of the transit, or the variations in grade between points A, B, T_1.

CIVIL TECHNOLOGIES

PROBLEM: WHAT IS THE DISTANCE FROM GROUND LEVEL TO TOP OF ANTENNA

1. LAYOFF AND MEASURE DISTANCE AB.
2. USING THE TRANSIT, MEASURE ANGLES BAT_1 AND ABT_1 AND FIND ANGLE AT_1B.
3. USING THE LAW OF SINES, FIND DISTANCE AT_1.
4. USING THE TRANSIT, MEASURE ANGLE T_1AT_2.
5. SOLVING FOR THE RISE OF RIGHT TRIANGLE T_1AT_2, FIND DISTANCE T_1T_2.



ANGLE BAT_1 = 46°-18'
ANGLE ABT_1 = 32°-45'
ANGLE AT_1B = 180°-(46°-18'+32°-45')
= 100°-57'

AT_1 = AB · $\frac{\text{SINE } 46°\text{-}18'}{\text{SINE } 100°\text{-}57'}$
= $\frac{437.2 \times .72297}{.98917}$
= 321.94 FEET

T_1T_2 = AT_1 x TAN 56°-52'
= 321.94 x 1.53205
= 493.23 FEET (ANSWER)

(5) Solving for the rise of right triangle T_1AT_2, find distance T_1T_2.

Performing these five steps produces an answer of 493.23 feet for the height of the antenna.

ARCHITECTURAL TECHNOLOGY

A person working in the Architectural field is continuously confronted with the problem of determining the scale and ratio reduction of drawings for inclusion into catalogs and brochures that may be presented to clients.

In the Architectural Program at NTID the student is continually presented this problem as he creates the necessary drawings for his projects.

A representative problem may be as follows:

Given: A drawing is made to a scale of 1/8″=1′0″ on a drawing sheet size of 18″ x 24″.

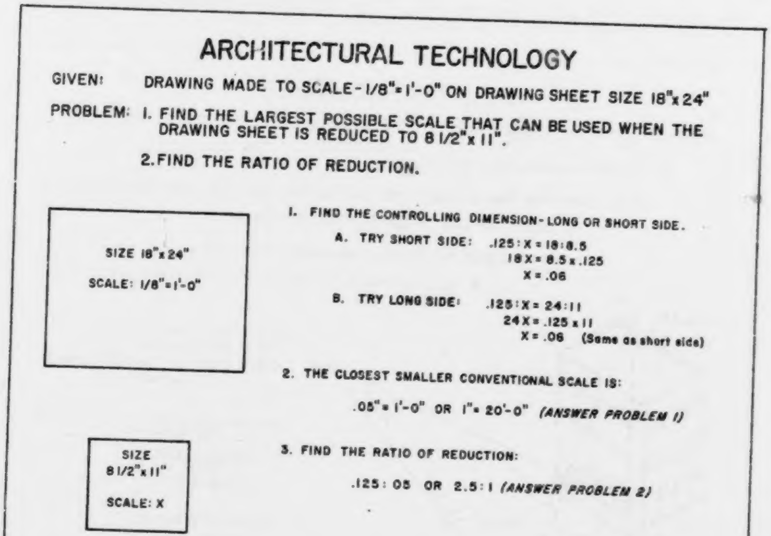
Problem

(1) Find the largest possible scale that can be used when the drawing sheet is reduced to 8½″ x 11″.

(2) Find the ratio of reduction.

The calculations that need to be performed are shown on the illustration.

The mathematics involved are of simple ratios and proportions which are used repeatedly on the job.



ARCHITECTURAL TECHNOLOGY

GIVEN: DRAWING MADE TO SCALE - 1/8"=1'-0" ON DRAWING SHEET SIZE 18"x 24"

PROBLEM: 1. FIND THE LARGEST POSSIBLE SCALE THAT CAN BE USED WHEN THE DRAWING SHEET IS REDUCED TO 8 1/2"x 11".

2. FIND THE RATIO OF REDUCTION.

SIZE 18"x 24"

SCALE: 1/8"=1'-0"

1. FIND THE CONTROLLING DIMENSION - LONG OR SHORT SIDE.

A. TRY SHORT SIDE: .125 : X = 18 : 8.5
18 X = 8.5 x .125
X = .06

B. TRY LONG SIDE: .125 : X = 24 : 11
24 X = .125 x 11
X = .06 (Same as short side)

2. THE CLOSEST SMALLER CONVENTIONAL SCALE IS:

.05" = 1'-0" OR 1" = 20'-0" *(ANSWER PROBLEM 1)*

SIZE
8 1/2"x 11"

SCALE: X

3. FIND THE RATIO OF REDUCTION:

.125 : 05 OR 2.5 : 1 *(ANSWER PROBLEM 2)*

The preceding problems are indicative of the type of mathematical problems a student will encounter in the various occupations. It is most important that the student understand mathematical concepts and to transfer these concepts to solving of practical problems. Too often the student is not able to identify the relevancy of concept to the practical application and therefore technical programs and courses often become difficult for the student to understand.

It is hoped that this paper may promote ideas in the development of the interrelationship of mathematical concepts and application, to enable the student to apply the mathematics that he learns in the classroom to the world of work.

ACKNOWLEDGMENTS

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Mr. Edward Maruggi—Machine Tool Operation.
Mr. George McCoy—Machine Tool Operation.
Mr. Robert Moore—Electronics.

Drawings for the presentation were prepared by Mr. Herbert Berry.

THE METAMORPHOSIS OF HIGH SCHOOL MATH IN A SCHOOL FOR THE DEAF, OR 30 YEARS OF HIGH SCHOOL MATH AT THE INDIANA SCHOOL FOR THE DEAF

Norman S. Brown, M.S., Teacher, Indiana School

"Awake! for Morning
in the Bowl of Night
"Has flung the stone that puts
the stars to flight:
"And lo! the Hunter of the
East has caught
"The Sultan's Turret in a Noose of Light."
—Omar Khayyam.

Thanks are due to old Omar of Persia who was a famous mathematician and a poet.

There is a story about some travelers coming to a motel at the end of a day in the future. The motel has an infinite number of rooms but they are all full. We would think the newly arrived travelers would not be able to get rooms. But the motel man knew his math. He simply moved the old guests into rooms of higher numbers up and put the newly arrived travelers in the first rooms, numbers 1, 2, 3, and so on. Infinite plus 1 equals infinite. Also, infinite plus infinite equals infinite.

The motel story gives a pretty good picture of civilization. It also helps us to understand why we get pushed around sometimes. The motel story also may help to explain how my story comes in.

To be sure, one person or one school does not stand alone in the progress made in the education of the deaf in the past few decades. What may be true of one school may also be true of other schools for the deaf. Nor is math the only subject to have undergone change.

With all due respect to other schools and other people, I wish to talk about the changing math picture at the Indiana School for the Deaf high school where I have taught for about 30 years.

At the Indiana School for the Deaf the high school is not the only department. There are primary, intermediate, vocational, and other departments. When we are able to do something well in the high school we must give due credit to the other departments. But time, space, and authority limit me to talking about a certain high school for the deaf and particularly math.

The precis of my story is this: Some of the math that I teach in a school for the deaf high school today I took in college in my time.

Thirty years ago algebra was a long two year course for juniors and seniors at the Indiana School for the Deaf. The textbook was *First Course in Algebra* by Nyberg, copyright 1924.

There was no math beyond algebra 1. We are not criticizing the ways of 30 years ago. It's just like looking in an old family album. Certainly, the students of the old days were pretty well grounded.

Today we offer algebra 1, algebra 2, geometry, trigonometry, and sometimes elementary analysis. I believe other schools have made comparable progress. Many of us have always believed that many deaf children are capable of greater achievement.

There are some new books coming out which have algebra 1 in two volumes for a two year course in algebra 1. We are ordering these materials for what we call underachievers, *Introductory Algebra*, 2 Volumes, by Jacobs, copyright 1968. We try.

Recall that I started 30 years ago with a two year algebra 1 course. In a way history is repeating but with some difference. Some of the difference is modern permissiveness. Perhaps we are learning to love our children. Permissiveness is good or bad, old or new, but that's another story—not here.

Someone likes to tell the story of a new teacher being interviewed by the boss. The boss asked if he taught the world is flat or round. The new teacher replied that he could teach it either way.

When I first asked my first boss what he wanted, he gave me a one word reply, "Results!". My present boss calls it "Accountability".

One measure of the success of a high school is the number of students who pass college entrance exams. In my opinion that is very important but not the only thing because there are still some people who do not go to college.

Now there are many opportunities for deaf people to continue into post deaf school training and education. In the past it was Gallaudet College. Now we have the National Technical Institute for the Deaf and other kinds of schools across the U.S.A. It seems that we are approaching opportunities unlimited for the deaf in education. We should be happy.

Admission to college is still a visible and exciting attainment, but I believe our schools for the deaf are trying to meet the needs of both the college and non-college bound student.

Over the years the Indiana School for the Deaf has been blessed with progressive administrations. The motto has always been "The children come first, last, and always". Somehow this motto has passed along from administration to administration. "Ain't God good to Indiana!" is the refrain of a beloved Hoosier song.

Policies and philosophies may have differed but the goal seemed to be the same. I believe any system works best if and only if there is cooperation and cohesion among the people in a system.

In 1940 the Indiana School for the Deaf became accredited by the state department of public instruction.

Sometime in the 1950's a four track diploma plan for the high school was started.

In the last few years an intensified program for under-achievers has been underway. In this program the basic 3 R's and communication are emphasized.

This year a work-study program was started. Many students go out on jobs for part of the day.

A pilot program for the multi-handicapped has been started.

A modern media laboratory has been established. The lab makes and prints many kinds of materials turned out by workshops. It is very helpful in many ways.

There is also a sheltered workshop program.

These are some of the main programs. There are also many auxiliary programs. There is a dating room for our boys and girls. I have been getting out of my area but I want to point out that our school is Progressive with a capital P.

As for math we require only a year of math in high school. We call that course General Mathematics. The other math courses which are elective are algebra 1, algebra 2, geometry, trigonometry, elementary analysis.

Flexibility is our guide and hope. In the past we had large groups of students herded into classes in say algebra 1 because we knew they should and could take algebra. We don't do that now.

But those who want to take more math are given every opportunity to get it. Sometimes a math class is made up of freshmen, sophomores, juniors, seniors. Sometimes a student is in a math A class but goes to an English B class. This flexibility is hard on the office. Once in a while we decide, "No more of those mixed up classes." But sooner or later comes a student needing adjustment and we try again.

It seems that in some ways the elective system works well but in other ways no. We get small classes of students who want more math. On the bad side is the fact that many people do not know what they want. Some people who don't want math later find they need more math to advance in their jobs.

We would like to turn out complete scholars, but modern education does not try to force an unwilling horse to drink. But we do try to open the door of opportunity.

Once there were a couple of boys who wanted to take elementary analysis. There seemed to be no place in the schedule but the office found a place for them. This year there was a group of sophomores and a junior who wanted algebra 1 and their schedules were arranged. We have regular schedules and regular classes but sometimes they can be changed.

There are many other examples of flexibility. It is not always possible for every student to get what he wants but if he really wants something he has a very good chance of getting it. We are not the best of all possible worlds yet. Besides, young people change their minds a lot.

Our math and materials are what is called modern. We are very thankful for the math institutes at Gallaudet College which give great impetus to improving math in schools for the deaf. My attendance at two summer institutes was very rewarding.

Over the years we have taught in many ways. Sometimes one way works better with a group or individual. Sometimes a group will like programmed material but another group will not do well with it. Some pupils like laboratory procedures. Some pupils thrive on discovery. Some pupils are rugged individuals.

Most pupils like to be taught the traditional way such as lectures, demonstrations, homework, reviews, tests. The rationale for this seems to be that the master knows the way ahead and, human nature being what it is, few people are able or willing to strike out on their own.

It is surprising how conservative many young people really are.

Few of our students like teaching machines. One boy said, "It's the same as in the book."

Few admit they care for models, films, and other media. Some say they don't need them. Some say they make another lesson which they don't understand anyway.

Someone said that teaching is a personal discovery. I believe few people teach something exactly the same way more than once or twice. This is not a methods course but perhaps a few examples may be permissible.

If some kids forget the principle of zero in multiplication we have a contest in multiplication and in the middle or at the end of a roster of several numerals is 0. We often have a good laugh afterwards as you can imagine.

Sometimes we have micrometer measurements. Using a model and individual micrometers we learn to read a micrometer. Then we review area and volume. Then at an opportune time we ask for the volume of a piece of paper. The natural inclination of many kids is that a piece of paper has no volume. Eventually one or two of the kids broadcasts the "discovery".

Good experiences in discovery do not happen very often, or so it seems. A recent one was with an old calculator which we had borrowed from the business education department to work with large numbers. The name of the machine is Marchant and there was no manual. We got some operations on it OK but I couldn't get division from it. I thought it was faulty. However, one of the kids tinkered with it from time to time and finally discovered division on the old machine. Then he made a program for me.

We often let the kids teach. Some do very well. It often leads to a lively discussion and the kids take a vote. The teacher keeps out of it and most of the time the kids come to reasonable conclusions.

Taking a vote on a problem is a good way to get many kids to take a second or several looks. The right ones argue more and more strongly; the wrong ones argue weakly, weakly until something gives.

We have used the freedom to learn approach. Some children do well. Some go to sleep. Others are lost. Perhaps with the new materials it will be much better.

I frequently begin a class with a pop quiz of 3 or 6 items. The short quizzes leave time for post-mortems, and other activities such as review, lecture, demonstration, introduction of the next assignment. I try to get the students to read for themselves and to use models, films, and other media but only a few do.

I have always been a fairly firm taskmaster. I try to assess a child's potential and try to expect reasonable effort. People seem to understand that ball players need to practice to be good. When comes the day there is a good team which has not practiced well, then we can believe there can be good students who do not study and practice well.

We do not like to flunk our kids. We do sometimes—not often. There are many reasons for this antipathy. Two are: We could make a test to flunk anyone. Sometimes we could flunk a student and he is admitted to a college freshman class. Then our faces could become red.

Between unit or chapter tests we like to give many short pop quizzes of 3 or 6 items. The short short quizzes leave time for followup and other class activity.

On the 3-item quiz no error rates A, B for 1 error, C for 2 errors, and D for 3 errors.

On the 6-item quiz the grades are A for no error, B+ for 1 error, B for 2 errors, C+ for 3 errors, C for 4 errors, and D for 5 or 6 errors.

This system of quizzes is almost fail proof. Many students like them and ask for them. Many people are more willing to gamble if they know they will not lose all.

We do not like to deny a student having poor English the chance to go farther in math. Many deaf children who have poor English can do well in math. We should let them run ahead with concepts, manipulation, understanding, discovery. Then try to slip in the needed verbalization. It is my experience that many deaf students are shut out when we emphasize verbal problems. If we turn them off nothing is gained.

Sometimes we have unfunny experiences from good math students who have weak English or vocabulary. There is the case of a former student who is a skilled programmer but does not move up higher in his office because of his English. But he is doing well and we did not turn him off because of his weak English.

Another boy went to technical school to learn tool and die making. This was a school for the hearing and communication was by pad and pencil. He was doing well. Formulas in math were no problem. But one day he came to me and asked what "calculator" meant. We found out that his instructor had suggested he use the calculator for convenience. He left smiling. When he was in our school we had tried to teach him words, English, and reading. We tried to get him to read his book. He tried but became frustrated. It was maybe a type of learning disability. So, we kept on with illustrations, examples, and other media. He was a whiz in his way. The point is we tried to give him the skill of English, but we did not let the English kill his math.

Often we can help our deaf pupils with their English. Sometimes they want to do something or go somewhere and wanting something enough they will write very good letters—not perfect but improving very much. On the other hand many things in math require logical thinking. For example, proofs of trigonometric identities offer rewarding possibilities of experience irregardless of English. You get a feeling of some significant success when you see a prelingually deaf student express himself in some faultless mathematical language. We math teachers should be for total communication in all things.

Geometry offers many possibilities to practice both English and reasoning. One idea is to decide if the converse of a statement is true or false. Example: If you live in Little Rock, then you live in Arkansas, which is true. If you live in Arkansas, then you live in Little Rock, which is false. Let the kids vote on that and pretend you don't know the answer and they will get really excited. Sometimes they will report you to the office.

Many of our students repeat the same math in college prep. It seems that they take the evaluation test at college cold, without review or warmup, and make low scores. But that is the responsibility of the college and often students choose to repeat a level in math at college. Whether our students repeat a math level or start at a higher course in college we feel they are entitled to all the math background we can give them. Some colleges want to teach their own math no matter what the students have had in high school.

Sometimes when we find a group of young students doing well in math we'll offer algebra 1 to a freshman class, even to 8th graders, if things are right.

The Indiana School for the Deaf has had summer school the past few years. Most of the time summer school is needed for remedial and enrichment work. However, sometimes a group of good students will get together for a formal course to advance a semester in math during summer school. Sometimes an individual will make good progress in summer school and then we'll try to find a place for him during regular school.

The popularity of things increases and decreases in time and place. In the past decade our government and other organizations have made efforts to stimulate interest in math. In the minds of many people that was necessary to meet the challenge of world competetion. Lately when certain segments of industry slow down the people of math and math based jobs are among the first to be laid off. If the charts of history continue true, then math again will become debased for awhile. But that is history.

A recent poll of 2.500 high school students in 22 states showed that math is the toughest subject and American history the easiest.

I am sure that what I have said is nothing new. What we want to emphasize is that we must not underrate our deaf children. When we meet a deaf child who is willing and able we must give the child every opportunity to soar on wings of math.

Surely, times change, ideas and ways come and go and return. In ancient Rome the pupils whipped and beat the teacher. In my time the teacher whipped a pupil for mischief. The pupil went home and got whipped again. Now the pupil goes to court and the judge tells the school that the pupil stays in school. If history repeats, then we teachers may soon get the whipping we might deserve.

And already some schools are paying the pupils for going to school.

A young friend is looking for a job as a math teacher. He says he can teach math either way, modern or old; even the union of the two if wanted.

"Oh, Love! Could thou and I
with fate conspire
"To grasp this sorry scheme of
Things entire,
"Would not we shatter it to
bits—and then
"Re-mould it nearer to the
Heart's Desire!"

—Omar Khyyam.

USES OF COMPUTER-ASSISTED INSTRUCTION IN THE TEACHING OF MATHEMATICS

O. Dennis Barnes, Ph. D., Director of Computer-Assisted
Instruction, National Technical Institute for the Deaf

Computer Assisted Instruction, CAI, is a relatively new instructional tool, particularly when compared to the traditional one teacher many students method. CAI appeared on the educational scene during the late 50's. Since that time CAI has begun to make an impact on the teaching and learning process. In no case, have teachers been replaced by the computer, nor will they ever. If anything, the advent of CAI has required more teachers to rigorously develop curriculum for implementation via CAI.

Mathematics is the most logical beginning for the development of CAI curriculum. Most individuals involved with CAI tend to have mathematical training as well as an interest in computers. This interest seems to be nessary since computer programming requires a logical problem solving capability; and as you well know, mathematics teachers are the most logical people in the world. It was not only these inherent talents that drew mathematics educators to CAI but there was precedent for the solution of mathematical problems by computer. Researchers have discovered ways of solving complex differential equations as well as the complicated arithmetic problems associated with monthly checking account statements. Even such esoteric problems as the discovery of perfect numbers have been accomplished. There is a classic story of the applied mathematician that spent one hour a day towards the discovery of new perfect numbers. He worked religiously for several years. In the process he discovered three new perfect numbers. In a casual conversation with a computer scientist, the mathematician boasted about his new discoveries. Subsequently, the computer scientist accepted the challenge of writing a computer program to solve this problem. One day the computer scientist invited his mathematician friend over to the computer center to witness his new program. In 30 minutes the computer found an error made by the mathematician and discovered five new perfect numbers.

This type of calculational capability of the computer can also be used in the classroom. Suppose that in your class you are investigating the relationship between the coefficients of a quadratic equation and its roots. By allowing the students to interact with the computer program, the student can have the opportunity to quickly identify what happens to the roots when, for example, the coefficients are doubled and halved. The student can give the computer any coefficients he likes and the computer can calculate the roots. This can be done quickly and accurately by the computer, where as it may take the teacher and students a great deal of time to discover the relationship.

The computer can also be used as a plotter control device. Assume that one wishes to plot the function $5x^2+2x+9=y$. The computer can quickly and accurately plot the function in order that the function and its plot can be discussed. The Santa Barbara, California, Public Schools used a computer in just this way. Several classrooms had computer terminals connected at a time sharing system. The teachers had written computer programs to solve many mathematical problems. During a regular classroom discussion a student may have asked the question about the behavior of a parabola near its vertex. By asking the computer to solve the equations for points extremely close to the vertex, a plot and a table of points could be printed by the terminal. The teacher could then display the acetate printout on the overhead projector for the entire class to see and discuss.

One of the most potential uses of the computer for classroom use is by the students themselves. There are several computer languages that are easily learned and readily available through time sharing centers; APL, Basic, Fortran to name a few. These languages allow the student to create his own computer programs to solve many types of problems. The student has the capability of asking and answering many questions that one teacher with many students cannot answer.

These calculational capabilities of the computer do not normally belong to the instructional tool called CAI. CAI is generally limited to direct instruction by a computer. The most common manner of CAI instruction used in mathematics has been the drill and practice method. Most teachers of mathematics are first to admit that students of mathematics generally lack fundamental skills such as addition, subtraction, multiplication, and division. You might ask yourself how many times you have given a student partial credit for using the correct method in solving a problem but adding wrong.

Because of this, the drill and practice we are so familiar with is a common CAI instructional strategy. By using a computerized instructional program, the student can be required to achieve a certain level of proficiency before progressing onto the next level of problems. One student can be given 25 practice problems, and another student may be given only 10. The first student may have required more practice problems because of the number of errors that he made, whereas the second student probably correctly answered most of his problems.

CAI is not limited to drill and practice. Another instructional strategy commonly used is the tutorial approach. This technique is similar to the technique used by most teachers in the classroom. A new topic is first presented to a student and then the student is asked to show how well he understands the concept by answering questions. A good example of this approach is the process of teaching the factorization of a number into its prime factors. The student is told to divide by two, then three, then five, etc. In a CAI program, this logical process of prime factorization can be presented to the student in a sequential fashion. The student can be given examples and shown how to factor them. After showing him how to solve the problem, the student can be asked to solve a similar problem. If he gets it wrong, he can be shown his mistake and given an additional opportunity to exhibit his proficiency.

All of this can be done without a teacher. However, CAI programs can only do what they have been programmed to do and a teacher is needed to assist the student with his special problems. This technique was quite extensively used in a very ambitious CAI project undertaken at the National Technical Institute for the Deaf. This project is called the Mathematics Diagnostic System (MDS). The purpose of the MDS is to prepare and remediate students in those skills necessary for the successful completion of Calculus. As is indicated by the name, the MDS is designed to diagnose deficiencies. A student is presented a general problem that requires several skills in order for its correct solution. If the student incorrectly solves this problem, he is given a simpler problem requiring only a few of the previously required skills. If he gets this problem incorrect, he is then given an even simpler problem requiring very few skills. If he gets this problem incorrect, he is generally given a worksheet that explains to him the particular skills that he is lacking. After reading a worksheet that explains these skills, the student is then asked to show how well he has acquired these skills by solving additional problems. In the event that the students is still not able to solve problems requiring the necessary skills, he is directed to go to his teacher and receive additional help.

In all cases, those skills that the student is deficient in are taught to him either by worksheets, the teacher, textbooks, or by the computer. The student, after being taught the skills, then must exhibit his proficiency in these skills by solving the problems correctly.

The MDS is an enormous CAI project. It covers all areas of mathematics from the eighth grade through the twelfth grade. Such areas as ratio and proportion, sets, real numbers, radicals and exponents, polynomials and factoring, relations and functions, equations and inequalities, graphs, systems of equations, determinants, matrices, geometry, analytic geometry, logarithms and exponential functions, and trigonometry are covered by this system. The National Technical Institute for the Deaf, Vestibule Mathematics Department is currently utilizing the MDS. The CAI Program is run in the NTID CAI Center using the IBM 1500 Instructional System.

Calculation, drill and practice, tutorial, and diagnostic are only four uses of the computer as an instructional tool in the teaching of mathematics. Many other applications exist within Computer Assisted Instruction. We are only limited by the imagination of the teachers and the CAI specialists, CAI is just beginning to make an impact on the education of the deaf student. The National Technical Institute for the Deaf is the only school for the deaf directly involved in the development and implementation of CAI curriculum. CAI can and will make a significant difference in the efficiency and effectiveness of the learning processes of the deaf students.

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Communication—ASB Dining Room

Chairman: Dr. H. W. Barkuloo, Director, Program for the Deaf, Seattle Community College.

10:30 a.m.–11:30 a.m.: "*Cued Speech at the Mary E. Bennett School*," Margaret Highnote, Mary E. Bennett School for the Deaf.

1:00 p.m.–2:00 p.m.: "*Orosensory Perception in the Deaf*," Milo E. Bishop, Department of Audiology and Speech Services, Purdue University.

2:00 p.m.–2:45 p.m.: "*The Reception of Verbal Information by Deaf Students Through a Television Medium—A Comparison of Speechreading, Manual Communication and Reading*," Dr. Robert Gates, Director of Vestibule Programs, National Technical Institute for the Deaf.

2:45 p.m.–4:00 p.m.: "*Three Years of the Total Approach—1968–1971*, Roy Holcomb, Area Supervisor, Deaf, Santa Ana, Calif.; "*The Total Approach*," John Prince, M.D., parent, Santa Ana School District.

CUED SPEECH AT THE MARY E. BENNETT SCHOOL

Margaret Tudor Highnote, Mary E. Bennett School
for the Deaf, Los Angeles, Calif.

"My personal goal and that of the school I represent is to so equip the deaf, that they will be able to adjust to and compete in a hearing world."

This was the philosophy of Mrs. Evelyn M. Stahlem, late principal of the Mary E. Bennett School for the Deaf in Los Angeles. Mrs. Stahlem was known for her implementation of innovative methods of teaching the deaf at the Mary E. Bennett School. Among those was Cued Speech. Cued Speech is felt to be an exciting and important new approach. I quote Mrs. Stahlem from a paper prepared for the Alexander Graham Bell Association for the Deaf in 1968:

> Because deafness is the greatest single educational handicap and precludes the acquisition of language which is mankind's greatest heritage in the way a hearing child acquires it compensatory methods must be employed.
>
> Traditionally deaf children have had to acquire language through lipreading which is an imperfect vehicle in that many sounds and portions of syllables and words are not visible on the lips; or, through finger spelling which is a reading language based on spelling rather than on sound.
>
> It is exciting to think that the means for presenting a truly spoken language to the deaf is available and that a method is at hand which will permit the presentation of spoken language and its recorded version based on the same sound system. Communication is *the* essential. Therefore standardization of a print-sound-meaning relationship which communicates is preferable to diversification. The combination of Sir James Pitman's Initial Teaching Alphabet and Dr. Cornett's Cued Speech is a salutary one for it provides a tremendous potential for the remediation of the learning deficit inherent in deafness because its usage provides a simplified and truly consistent key to the code for sending and receiving of language whether spoken or written.

Dr. R. Orin Cornett went to Gallaudet College as a layman in education of the deaf. Initially concerned with the language deficiencies of the Gallaudet students he studied the methods of educating the deaf. Impressed with some aspects of both the oral and the manual approaches, he devised the hand cues called Cued Speech. The name is somewhat of a misnomer as it was devised to be a clear input of language, thus should be called Cued Language. An after effect of Cued Speech was that children could monitor their own speech, thus in many instances improving their speech.

Cued Speech consists of 7 hand cues representing the consonants that are superimposed on 4 face positions that represent 12 vowels and 4 diphthongs. For example, the vowel position for ω is on the chin. The hand cue for h, s and r can be combined with the vowel ω to make hω, sω, rω. In this way all the sounds are clearly shown. One might say, "That is a sign." It is simply a cue that clarifies the information given on the lips. In the first example, hω, sω and rω were shown to have the same hand cue. One must watch the lips to see if the speaker is saying hω or sω or rω. Therefore, the information on the lips is clarified by the hand cue. Consonants that look similar on the lips have different hand cues. Thus, there is a way to differentiate sounds such as b, p and m; f and v; bop, mop and pop that look identical on the lips but have different hand cues.

Now through Cued Speech there is a way to clarify homophenous words. There is a way of language input that is similar to the way a hearing child receives and decodes language. To be most effective the teacher and family should cue every word said, thus, giving the deaf child total language input.

The advocates of Cued Speech feel it has three main advantages:

1. It brings the child's attention to the face and lips because the cue positions are near the mouth.

2. It overcomes the problems of our unphonetic language because the cues are phonetic—the deaf child visually receives and decodes the cues much in the same way the hearing child receives and decodes oral language.

3. The cues are an aid in helping the child give more accurate attention to all the phonemes in a word, thus, giving him more confidence in pronunciation and better intelligible speech.

Cued Speech was initiated at Mary E. Bennett School in 1966 along with 1/t/a and Generative Grammar. A survey, concerning teachers' evaluation of Cued Speech at Mary E. Bennett, was taken in May, 1971. Of the 25 faculty members who received questionnaires, 17 returned completed questionnaires. Some of the questions and answers that might be of interest to you were as follows:

Do you use Cued Speech in your classroom?

15 teachers replied yes; 2 no.

What types of children do you feel benefit most from a Cued Speech program?

The answers ranged from good lipreaders to poor lipreaders, bright students to slow students. For the 17 questionnaires there were 17 different answers to this question. The same holds true for the next question.

What types of children do you feel don't benefit from a Cued Speech program?

The results of these two questions show the need for more research on Cued Speech.

By what method do you teach Cued Speech?

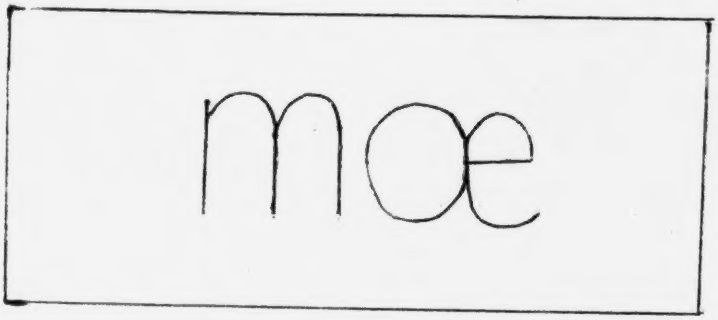
Three replied that they taught cues analytically. 10 teachers cued to their class but did not expect the students to cue in return. Most teachers taught the vowels and vowel cues analytically.

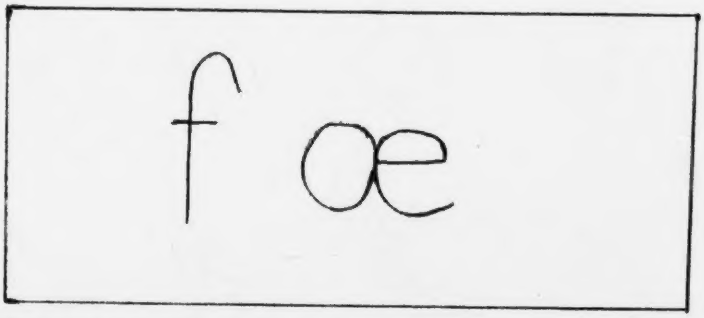
How do you use Cued Speech in your classroom?

One teacher used Cued Speech in teaching language. 13 teachers used Cued Speech in teaching language and speech. Three used Cues for correctional purposes only. One teacher did not use Cued Speech at all. Another teacher used Cued Speech only for commands.

The following are examples of how teachers used Cued Speech in their classrooms:

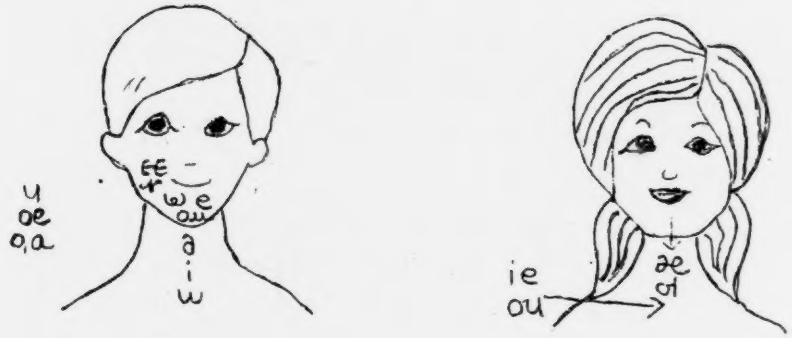
One teacher cued everything she said to the class. She began in September by teaching cues analytically. She taught one position and configuration at a time. The class practiced cueing and reading everyone's name at the beginning of the year. She introduced the cue position of each vowel and the sound it designated. The class practiced with the i/t/a cards both cueing sounds and reading the cues. Examples of the cards are illustrated below:

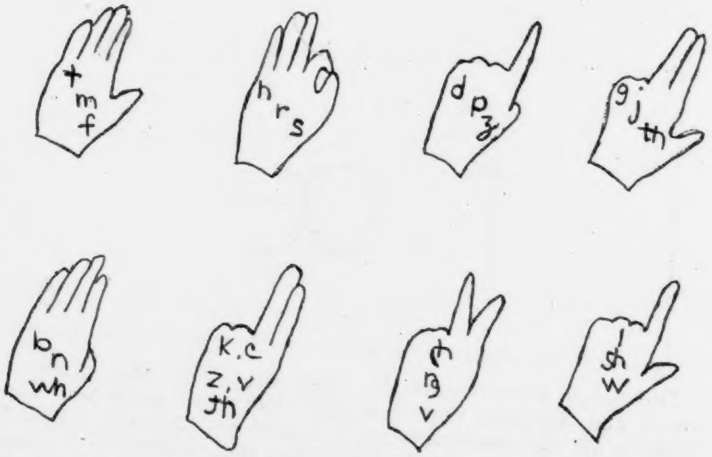

mœ


f œ

Dipthongs were taught the same way. The class practiced the vowel and dipthong positions until they were perfected. The class began with the consonants m, f, t, and learned each configuration in approximately one week. Each time they worked on a consonant configuration they practiced it with all the vowel positions. As the class learned more configurations, they combined them with vowel positions and began practicing familiar words. The teacher made up 2 sets of practice cards each time the class worked on a consonant configuration: (1) syllables—the consonants, vowels and dipthongs in all possible combinations; (2) words containing the consonants they knew and the ones on which they were presently working. The pupils played cueing games and made books that they took home when completed. There was one picture per page of the vowel position or consonant configuration and pupils filled in which sounds the position or configuration designated.

The class practiced cueing and reading new vocabulary all the time. A chart of all vowel positions and consonant configurations was kept in front of the class and the pupils referred to it when they were unsure of themselves. The reference chart is illustrated below:





Another teacher suggested that it should be called "Cued Language" instead of "Cued Speech". She used it in story telling, preposition work and in other language work. She stated that she had profoundly deaf children who "stayed right up with hard-of-hearing children." Common idioms and words that were difficult to explain became more natural for the children even without formal teaching. She found that Cued Speech helped children to notice similarities in words. Children, age 6, spontaneously pointed out to the teacher that "toast is like ghost", "movie and T.V. both have the *ve*-sound," etc.

The overhead projector was utilized in one teacher's classroom to teach Cued Speech. The transparency is illustrated below:

The teacher prepared the transparency of a girl's face and neck. She then cut out hands in the consonant configurations from colored acetate. Once the children had become familiar with the vowel positions on the face, she could superimpose a hand configuration on a vowel position to make a word or syllable. The children could manipulate the hands to make their own words.

A video tape was made of two teachers at the Mary E. Bennett School using Cued Speech in the classroom. Both teachers in the tape were cueing while presenting a lesson and were not specifically teaching cues. They did not expect the pupils to cue in return.

One final question of interest from the questionnaire was:

> Do you wish Cued Speech to be continued at Mary E. Bennett?
>
> Of the 17 teachers who returned questionnaires, 13 said yes. Three (3) did not answer this question; 1 was "not sure." Some of the answers were qualified by classroom experiences.

One teacher very well expressed the apparent feeling of the majority of the teachers at Mary E. Bennett when he said:

> At this point, I feel that it is still in the experimental stage and until more time has elapsed, when a better evaluation can be made, I can neither speak for nor against its use in the program for the deaf child.

OROSENSORY PERCEPTION IN THE DEAF: IMPLICATIONS FOR THE ACQUISITION AND CONTROL OF SPEECH

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It is well known that language in its spoken form (speech) is acquired primarily through the ears. The close relationship between hearing and speech development is most apparent in the young developing deaf child, where his sensory deficit is responsible for the retardation of speech and language development. Under certain conditions, which are still not well understood, it is possible for deaf individuals to compensate, in part at least, for their loss of hearing and to develop functional speech and language. Before the conditions most conducive for teaching speech to the deaf can be specified, the normal process by which speech is acquired and stabilized must be understood. Such an understanding may also provide insight as to why some individuals develop speech with relative ease while others struggle unsuccessfully for years.

It has been pointed out that speech is a skilled body action, like touch typing or piano playing, involving the coordination of intricate and complicated patterns of muscular activity (Ladefoged, 1967). It follows then that speech, like any other skilled motor movement, can be developed and refined only when the talker has appropriate information about the progress of the activity. In speech production such information is supplied to the talker via auditory and oral feedback. When auditory function is lost it is logical to assume that the talker must rely primarily on the orosensory mechanism for the tactile and proprioceptive information needed to acquire and stabilize speech, thus making the understanding of orosensory processes critical for teaching speech to the deaf. In spite of its potential importance, relatively little is known about the characteristics of the orosensory processes in the deaf population.

There is, however, a substantial literature that deals with the sensory processes postulated to control speech that developed in conjunction with normal auditory function. That literature suggests that the finely coordinated motions of the mouth do not result from sequences of spatially and temporally patterned motor impulses released blindly into the efferent network from centers deep in the nervous system. Some patterns of the motor impulses must be modified and restructured at various motor relay stations along the voluntary control pathway in accordance with information received from the peripheral sensory appatatus. Experiments in which the sensory input avenues have been temporarily disrupted with nerve block anesthesia, however, have reported that speech, while phonetically distorted, remains highly intelligible (Ringel and Steer, 1963; Ladefoged, 1967; Scott and Ringel, 1970). It is possible, therefore, that some motor commands received by the articulatory apparatus are not affected by the absence of tactile feedback from the primary articulators. Scott and Ringel (1971) have emphasized the importance of this issue and have hypothesized that a closed-loop (tactile-kinesthetic) feedback system may not operate for all types of articulatory activities. The possibility of open-loop control for certain articulatory activities, along with closed-loop control of other articulatory movements, also has been postulated by MacNeilage (1970). In such a model of articulatory control, the predominance of one type of feedback over another may be a function of the stage of language/speech development under discussion. In other words, the relative importance of sensory processes in acquiring and stabilizing speech may be quite different from its importance in controlling the production of highly overlearned articulatory gestures after language/speech has been acquired. During the early stages of speech development speech movement can be assumed to be highly dependent upon sensory mediation (both auditory and orosensory, at least) for their proper synergy, but as speech patterns become stabilized, sensory mediation appears to be less important.

The demands placed on the orosensory mechanism in the young developing deaf child are much greater than in the hearing child, since the auditory feedback normally available for the acquisition and stabilization of language/speech processes is missing. The ability of the deaf child to substitute orosensory information for auditory functions may well determine his ability to acquire intelligible speech (and sophisticated language abilities).

To acquire some understanding of the orosensory capabilities of young deaf adults three experiments were conducted. The participants were 18 deaf high school students enrolled at the Indiana School for the Deaf all of whom, according to school records, had a hearing loss in the better ear of more than 80 dB ISO since birth, and normal intelligence. An analogous group of normal-hearing high school students was used for comparison.

EXPERIMENT I. TWO-POINT DISCRIMINATION

Measurement of two-point discrimination—the minimum separation of two puntiform stimuli that can be discriminated as two—has been commonly used in neurological examinations of sensory acuity. In discussing the neurophysiology of perception, Ruch (1951), theorized that two-point discrimination is an example of a basic discrimination process, and, in fact, may be considered as the prototype of sensory discrimination in all sense modalities. Ringel and Ewanowski (1965) used two-point discrimination measurements in the oral region as a means of assessing the oral sensory capacity of normal speaking subjects, and Addis (1968) used this technique to compare the orosensory acuity of normal talkers and speech defectives, and found the two groups not to differ significantly.

Measurements of two-point disorientation on the lower lip and the tongue tip were obtained by the use of an esthesiometer, a device described in detail by Ringel and Ewanowski (1965). The esthesiometer was designed specifically for this application and permits controlled calibration of the applied force as well as distance between points. The distance between stimulus points is adjustable in 0.5 mm increments, with a range of point separation from 0 to 10 mm. Force is adjusted by set screws which manipulate spring tension on the fulcrum of the stimulus probe. Gap between points and force are calibrated by a micrometer and stylus pressure gauge.

Each subject was blindfolded and seated comfortably in a dental chair with his head positioned in a rest that cradled it at a 45° angle. Subjects were instructed, verbally and/or manually, to indicate, by raising the appropriate number of fingers, whether they felt one or two stimulus points. The stimuli were presented in discrete increments of 0.5 mm on the tongue tip, followed by a series on the lower lip. The probe tip was left in contact with the skin for approximately two seconds. Increasing and decreasing series of gap sizes were each used three times. A subject's two-point limen was determined by converting the median values of each trial into a mean score; the values used to represent the two-point limen, therefore, represent responses to three series of increasing and decreasing gaps.

The mean discrimination scores for the subjects in the deaf and normal-hearing groups were not significantly different. The mean two-point limen values and the standard deviations for the tongue tip and lower lip are shown in Table I. The magnitude of these differences limens are consistent with those reported by Ringel and Ewanowski (1965) and Addis (1968), and support the idea that the deaf have normal tactile acuity in the oral region. In other words there is no reason to believe that the deaf have deficits in the peripheral sensory or central transmission network. These data of course do not provide direct insight into the manner in which sensory information is processed at higher central levels.

TABLE I.—SUMMARY TABLE OF MEANS AND STANDARD DEVIATIONS OF 2-POINT LIMEN VALUES (IN MM. FOR TONGUE TIP AND LOWER LIP FOR NORMAL HEARING AND DEAF SUBJECTS

Location	Normal		Deaf		
	Mean	Standard deviation	Mean	Standard deviation	t*
Togue tip	1.15	1.09	1.57	1.78	0.82
Lower lip	2.13	1.60	2.67	1.70	0.96

*p (0.01)=2.57.

EXPERIMENT II: ORAL FORM DISCRIMINATION

Oral categorization ability has been shown by Ringel (1968), Ringel *et al.*, (1970), and Edwards (1970), to be related to speech, and possibly language, facility. To examine the oral categorization behavior of the deaf a procedure developed by Ringel and his associates (1970) was used. This procedure, a modification of the two-alternative, forced-choice paradigim requires the subject to orally explore two serially presented plastic forms and determine if they are the same or different.

The stimulus ensemble consisted of 9 forms belonging to 3 geometric categories—triangle, square and parallelogram—with each category being represented by 3 sizes. The index of size was arbitrarily taken to be area. The forms shown in Figure 1 were made of

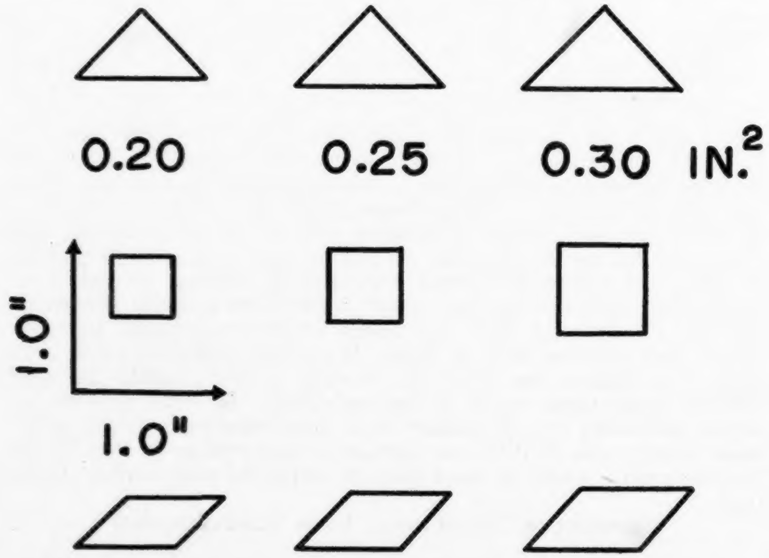

FIGURE 1. *Forms used for the oral discrimination tasks. The material is a clear, heat-resistant, inert plastic. The major dimensions of each item can be estimated from the scale in the figure; all thicknesses are approximately 1/16 inch.*

a clear, heat-resistant inert plastic, approximately 1/16-inch thick. Each form was paired with every other form and itself to provide a total of 45 comparisons, of which 9 were the same (identical form presented consecutively) and 36 were different (forms in each pair differing in shape and/or area). Response bias in favor of *different* was minimized by allowing the identical, that is *same* pairs to appear an additional time. Prior to analysis, these sham items were removed.

The test procedure called for a form to be presented for exploration in the mouth, removed, and a second form presented in its place. The time interval between the removal of form 1 and the presentation of form 2—the interstimulus interval—was approximately 5 seconds. The order of presentation of pairs was randomized for each subject and the order of presentation of a given pair was established apriori by chance. The subjects were verbally and/or manually instructed that they were to determine if the two forms were *same* or *different*. Responses were made either manually or orally. After instruction, the subjects were blindfolded and tested informally to be sure they understood the task.

TABLE II.—RESULTS OF ORAL FORM DISCRIMINATION TESTING SHOWN AS ERROR PERCENTAGE AVERAGED OVER THE NORMAL AND DEAF GROUPS SEPARATELY. THE CATEGORY CALLED DIFFERENT HAS BEEN DIVIDED INTO ALL POSSIBLE SUBCATEGORIES IN WHICH THE PARAMETERS BEING VARIED CAN BE ISOLATED

	Error rate (percent)	
	Normal	Deaf
Identical	20	17
Different	9	22
Area varied	23	44
Shape varied	7	19
Both varied	2	12

The results of the form discrimination testing are summarized in Table II. For simplicity in discussion, these results are shown as error percentages averaged over the hearing and deaf groups separately for a variety of comparisons under test. The over-all error rates for the two groups of subjects were 21 percent for the deaf group and 11 percent for the normal-hearing group. In the table, however, the errors have been arranged by various categories to demonstrate that the two groups of subjects are actually differentiated on the basis of their evaluation of *different* pairs. In other words (see the first line of Table II), when identical pairs were pairs at a higher rate than the hearing subjects, while the deaf subjects made these errors at approximately the same rate as the normal subjects; (2) the talkers with functional articulatory problems made errors on different pairs at a rate similar to that of the hearing group, while the deaf subjects displayed more errors of this type.

EXPERIMENT III: MANUAL FORM DISCRIMINATION

Form discrimination by means of taction also can be evaluated in the hand. Edwards (1970) has shown that the ability to discriminate forms manually is not different in populations of normal talkers and speech defectives. On the other hand, since deaf educators sometimes express the idea that, as a result of their hearing impairment, the cognitive development of deaf children is retarded, a manual test of form discrimination provides a control task to account for deficiencies in response attributable to the categorical labels used in the oral experiments. Accordingly a manual form discrimination task was administered to the subjects who participated in the oral form task discussed above.

The overall error rates in the manual discrimination task were not very different for the normal-hearing and deaf subjects, being 13 percent and 11 percent, respectively. A breakdown of the errors, in Table IV, shows that the patterning of errors in the test materials was the same for the two groups of subjects. In general the deaf subjects performed as well as, or better, presented, both groups of subjects erred in calling them *different* approximately 20 percent of the time.

On the other hand, when pairs were different, the deaf group of subjects called the items the same more than twice as often as did the normal-hearing group. The lower portion of Table II also shows error rates when either one parameter was varied or both are allowed to vary. The relative difference between the two groups was greatest when more than one parameter was manipulated.

The results can be compared directly to responses collected by Rossman (1970) from a group of normal talkers and a group of talkers with functional defects of articulation, using the same set of forms. In that study the group of articulatory defective subjects made errors on 17 percent of their trials, while the normal subjects made errors 11 percent of the time. A more detailed breakdown of the Rossman results are shown in Table III for comparison with the present experimental findings; the errors of the two normal groups have been pooled for convenience. The patterning of errors in the experimental groups from the two studies differs in two major respects: (1) the talkers with functional articulatory problems made errors on identical pairs at a higher rate than the hearing subjects, while the deaf subjects made these errors at approximately the same rate as the normal subjects; (2) the talkers with functional articulatory problems made errors on different than the hearing subjects. These results, of course, do not support the idea that cognitive factors contributed significantly to the poor performance of the deaf on tasks of oral form discrimination.

TABLE III.—THE RESULTS OF ORAL FORM DISCRIMINATION TESTING FOR NORMAL-SPEAKING, DEAF, AND ARTICULATORY DEFECTIVE SUBJECTS. RESULTS ARE EXPRESSED AS ERROR RATES AVERAGED OVER THE DEAF AND ARTICULATION DEFECTIVE GROUPS[1] SEPARATELY, WHILE THE NORMAL-HEARING SUBJECTS FROM BOTH STUDIES HAVE BEEN POOLED

	Error rate (percent)		
	Normal (n=38)	Deaf (n=18)	Articulatory (n=20)
Identical	22	17	45
Different	8	22	9
Area varied	24	44	27
Shape varied	4	19	9
Both varied	2	12	3

[1] Data for articulatory defective subjects are drawn from a study by Rossman (1970).

It has been previously demonstrated that two-point discrimination limens on the tongue and lip were the same in a group of deaf and normal-hearing young adults. These results were interpreted to mean that the deaf have normal sensory acuity in the mouth. In spite of this normal acuity the performance of the deaf subjects on a test of oral form discrimination was significantly worse than that of the normal-hearing subjects. This inferior performance should not be attributed to some general cognitive deficiency in the deaf population since the performance of the deaf subjects on a test of manual form discrimination was equal to that of the normal-hearing subjects. Similar behavioral deficiencies—both in form discrimination and in articulatory abilities—have been noted in various populations of persons with speech disabilities. It is tempting to speculate that deficiencies in oral form discrimination may be a signal of a deficit in some underlying mechanisms affiliated with language/speech. This line of reasoning has been previously discussed. Ringel et al. (1970), stated:

> Retention, anatomical maturation, and motor development, factors that are said to be critical for the development of form discrimination abilities, are also said to underly the processes of speech. One can ask, therefore, whether sensory-discrimination abilities and speech development exist in a cause-effect relationship, or whether they both are related to a more general factor such as neurological maturation and/or perceptual skill development.

Either of the above alternative explanations is likely to have a direct influence on future therapeutic thinking. Should the cause-effect hypotheses be accepted, then orosensory disturbances can be considered as an additional etiologic entity for disorders of articulation, and ways of compensating for disrupted orosensory input channels should be sought. Such compensatory measures may take the form of prosthetic devices (Grossman and Bosma, 1963), drugs which enhance or inhibit sensory input (Ringel, 1968), training aimed at developing alternate input channels in lieu of the disturbed one (Chase, 1967) and/or training speech defective persons in oral form discrimination tasks (Ringel *et al.*, 1970). If, on the other hand, orosensory discrimination abilities and speech development are related to more general factors, Ringel *et al.*, (1970) have suggested that a more global approach, such as that used with brain-injured or perceptually disturbed persons, may be appropriate.

Considering the heavy demands placed on orosensory processes of deaf children in developing language/speech, and the results of the experiments reported in this paper, it is conceivable that the orosensory characteristics of a deaf child may strongly influence his chances for developing intelligible speech.

TABLE IV.—RESULTS OF MANUAL FORM DISCRIMINATION SHOWN AS ERROR PERCENTAGES AVERAGED OVER THE NORMAL AND DEAF GROUPS SEPARATELY. THE CATEGORY CALLED DIFFERENT HAS BEEN DIVIDED INTO ALL POSSIBLE SUBCATEGORIES IN WHICH THE PARAMETERS BEING SPECIFIED CAN BE ISOLATED

	Error rate (percent)	
	Normal	Deaf
Identical	16	10
Different	12	9
Area varied	45	36
Shape varied	2	1
Both varied	1	1

ACKNOWLEDGMENT

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THE RECEPTION OF VERBAL INFORMATION BY DEAF STUDENTS THROUGH A TELEVISION MEDIUM—A COMPARISON OF SPEECHREADING, MANUAL COMMUNICATION, AND READING

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for the Deaf

How should verbal information be presented to older deaf students in order to assure a maximum degree of reception of that information? This question, because of its relationship to student success within a post-secondary, hearing environment, is a high priority area of research interest at NTID. I recently had the opportunity to direct a research project aimed at the question of the degree of receptive functioning of deaf young adults when presented with verbal information through several different communicative modes and combinations of these modes.

Today, it is my purpose to: (1) describe this investigation, (2) share the results of the investigation with you, and (3) discuss the possible extension of these findings into the learning environment.

Part I: The Investigation

One can very crudely dichotomize information into two categories: verbal and non-verbal. And, with regard to the transmission of both categories of information, we can discuss the primary channels of auditory and visual transmission. Table 1 denotes the primary modes through which verbal and non-verbal information is transferred through the auditory and visual channels.

TABLE 1.—PROCEDURES FOR TRANSMITTING INFORMATION

	Transmission/Channel	
	Auditory	Visual
Verbal information	Speech	Print.
Nonverbal information	Music (without singing) and nonspeech sounds	Pictures.

However, persons with severe hearing losses rely primarily upon the visual channel to receive verbal information. Speechreading, the manual alphabet, the language of signs, gestures, and written language are used either independently or in combination by the deaf to receive verbal messages. Thus, we see a reliance by deaf persons upon the visual channel to compensate within the oral society for their inability to hear speech distinctly.

Our initial interest in this area was primarily with transmission of information through the medium of television; for within the RIT environment deaf students who are integrated into the mainstream of academic programming and take classes with hearing peers often face the challenge of a televised course or portion of a course. Additionally, we felt that television was a major tool which could be used effectively with deaf students in those academic programs within NTID which are designed for deaf students alone (i.e., Vestibule Programs and Certificate-Diploma-Associate Degree Programs).

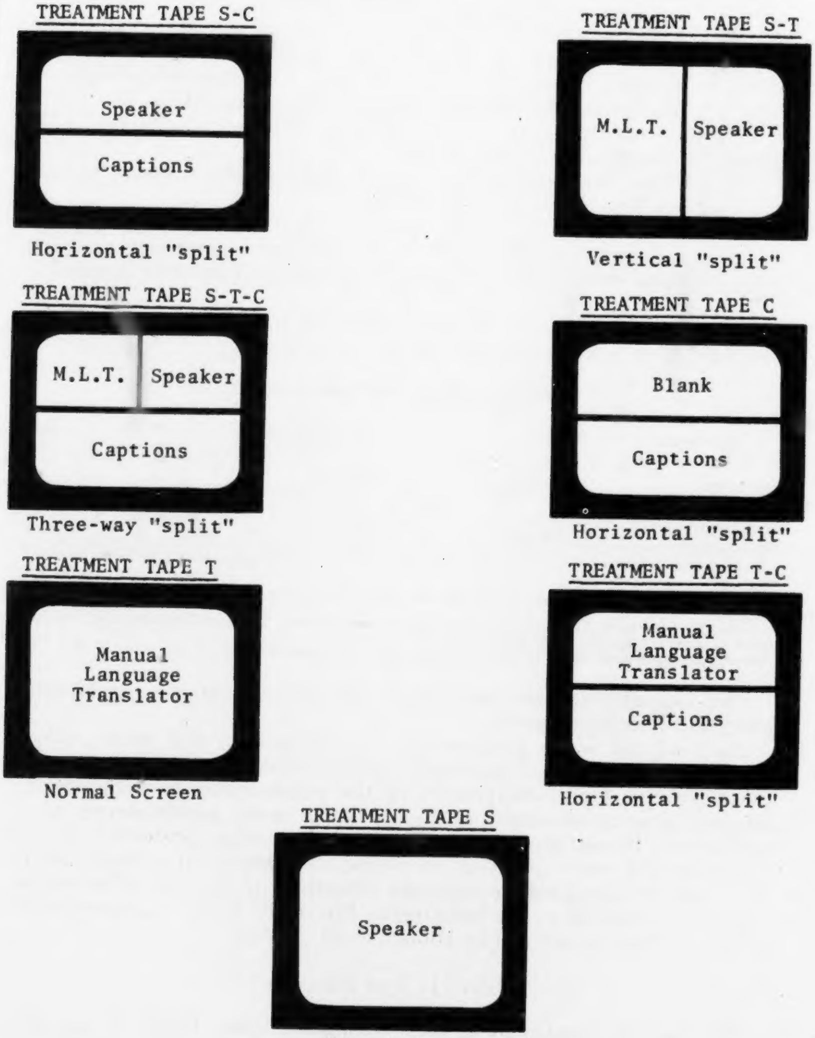
Accordingly, we embarked upon a project designed to compare the amount of information received by deaf students who viewed the following television formats:

(1) A speaker only on a normal screen.
(2) A manual language translator on a normal screen.
(3) Captions only—with the captions "crawling" from the bottom to the middle of the screen and then disappearing.
(4) A speaker and a manual language translator in a split-screen format.
(5) A speaker and captions in a split-screen format.
(6) A manual language translator and captions in a split-screen format.
(7) A speaker, a manual language translator, and captions in a split-screen format.

Seven treatment videotapes (each of which used one of the formats just described) were developed with the variables of rate and content controlled. The *rate* of presentation of all information in each of the treatments was approximately 125 words per minute. The *content* of all seven videotaped treatments was a 1620 word fictional story concerning two warring African nations. This content was predetermined to be at approximately the sixth grade level of reading difficulty.

FIGURE 1

TELEVISION SCREEN DISPLAYS USED IN
THE SEVEN TREATMENT VIDEOTAPES



TREATMENT TAPE S-C
Horizontal "split"

TREATMENT TAPE S-T
Vertical "split"

TREATMENT TAPE S-T-C
Three-way "split"

TREATMENT TAPE C
Horizontal "split"

TREATMENT TAPE T
Normal Screen

TREATMENT TAPE T-C
Horizontal "split"

TREATMENT TAPE S
Normal Screen

The experimental population consisted of 140 students who were *randomly* selected from those students entering programs at the National Technical Institute for the Deaf who met five criteria:

(1) Severe hearing impairment (operationally defined as a hearing level of 80dB or greater (ISO standards) in the better ear, pure tone average for the speech range: 500–2000 Hz.).

(2) Seventh grade or better reading level (as estimated from scores on the Cooperative Reading Test).

(3) Average or better intelligence (as measured by the performance scale of the Wechsler Adult Intelligence Scale).

(4) Normal vision (or vision corrected to normal standards).

(5) No remarkable central nervous system disorders.

The 140 subjects, who were randomly selected, displayed, as a group, the following characteristics:

(1) They were profoundly deaf as indicated by a mean, better-ear, hearing loss of over 96 dB.

(2) Their mean reading achievement level was better than approximately one-third of the 9th grade hearing students upon whom the Cooperative Reading Test was standardized.

(3) They were above average in intelligence.

(4) They were approximately 21 years of age.

TABLE 2.—SUMMARY OF GROUP CHARACTERISTICS

Characteristic	Mean[1]	Standard deviation
Hearing level[2]	96.17 dB	16.10 dB.
Reading level[3]	32 percentile	+1 S.D.=59 percentile. −1 S.D.=11.1 percentile.
Intelligence[4]	114.8	10.52.
Age	20.9 years	2 years.

[1] N=140.

[2] Based upon each subject's puretone test average for the better ear across the speech range, 500–2,000 Hz, ISO standards.

[3] Based upon norms established for 8,839 9th grade hearing students on whom the Cooperative Reading Test was standardized (available through Educational Testing Service).

[4] Based upon scores on the Wechsler Adult Intelligence Scale, Performance Section.

The 140 subjects were then *randomly assigned* to seven treatment groups of 20 subjects each.

Each of the seven groups then viewed one of the seven videotaped treatments, the treatment being different for each of the seven groups. Upon completion of the presentation to each group, 39 four-alternative multiple choice items were administered as a measure of immediate recall of verbal information presented (or of "learning", if you will accept an operational definition of that term). The test was designed to measure retention of factual information contained in the story, or learning at the initial level, i.e., knowledge of specific facts as defined by Bloom, et. al. (1956).

PART II: THE RESULTS

The various treatment groups' responses (see Table 3) on the criterion instrument were as follows:

The group which viewed *captions only* had a mean score of 26.0. The group which was presented with *all three modes* (speaker, translator, and captions) had a mean score of 25.7. The group which viewed a *speaker and captions* was exactly the same with a mean score of 25.7. The group with a *translator and captions* had a mean score of 24.0. The group with a *translator only* had a mean score of 15.0. The group which viewed a *speaker and a translator* had a mean score of 13.7. The group which speechread a *speaker only* had a mean score of 13.5.

TABLE 3.—RELATIVE PERFORMANCE OF SEVEN GROUPS ON TEST OF IMMEDIATE RECALL OF VERBAL INFORMATION PRESENTED

Treatment Group[1]	Mean score[2]	Standard deviation	Range of scores
C	26.05	7.704	11–35
S–T–C	25.65	10.046	12–38
S–C	25.65	7.357	14–37
T–C	23.95	6.874	13–36
T	15.05	3.866	4–22
S	13.50	3.735	5–20
S–T	13.70	2.431	9–20

[1] N=20 for each group.
[2] A chance score would be approximately 10 (9.75).
[3] 0–39=possible range of scores.

Note that the scores obtained by the three lower-scoring groups were not a great deal above chance. Interesting too, is that the highest scores obtained by the three lower-scoring groups were not as high as the mean scores of the four higher-scoring groups.

This data was subjected to an analysis of variance test and the yield of this test indicated significance at well above the .001 level of probability (in fact it was higher than any statistical table available to us). We might estimate it to be the .000000001 level or perhaps at even a more ludicrous level. But the fact is evident. These were not "chance" differences which occurred. Of this we can be quite certain.

TABLE 4.—SUMMARY OF THE ANALYSIS OF VARIANCE AMONG THE SEVEN GROUPS ON TEST OF IMMEDIATE RECALL OF VERBAL INFORMATION RECEIVED

Source of variation	Sum of squares	df	Mean square	F
Between treatments	4612.87	6	768.81	*20.49
Within treatments	4989.55	133	37.52	
Total	9602.42	139		

*p<.005 (p.005=3.09).

A further analysis, using Duncan's New Multiple Range Test, indicated that in terms of performance the treatment groups settled into two classes: three inferior groups which did not differ significantly from one another and four superior groups which did not differ significantly from one another. The common difference between the superior groups and the inferior groups was the incorporation of captions into the presentations of all superior groups.

TABLE 5.—SUMMARY OF THE APPLICATION OF DUNCAN'S NEW MULTIPLE RANGE TEST TO THE PERFORMANCE OF THE SEVEN GROUPS ON TEST OF IMMEDIATE RECALL

Treatments	S[1]	S–T[1]	T[1]	T–C[1]	S–C[1]	S–T–C[1]	C[1]	Shortest significant ranges at p.001
Means	13.50	13.70	15.05	23.95	25.65	25.65	26.05	
S 13.50				10.90	12.60	12.60	13.00	$R_2=2.48.$
S–T 13.70				10.25	11.95	11.95	12.35	$R_3=2.56.$
T 15.05				8.90	10.60	10.60	11.00	$R_4=2.61.$
T–C 23.95								$R_5=2.65.$
S–C 25.65								$R_6=2.68.$
S–T–C 25.65								$R_7=2.71.$

$\underline{\text{S   S–T   T}}$[2][3] $\underline{\text{T–C   S–C   S–T–C   C}}$[2][3]

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[1] The range between 2 means is not listed when it did not exceed the apropriate significant range at p.001.
[2] Any 2 treatment means not underscored by the same line are significantly different.
[3] Any 2 treatment means underscored by the same line are not significantly different.

A test of delayed recall of information following one week produced similar results in terms of mean scores and in terms of general clustering of treatment groups into the same superior-inferior classes.

The results of this investigation, as I have summarized, indicate that television can convey verbal information to the deaf student, given that this information is presented in a graphic (captioned) mode. The findings of this study provide no evidence that either speech or manual communication are as effective as captions in conveying verbal information to deaf students.

The study's findings also indicate that combining a speaker and/or a manual language translator with captions does not significantly increase the amount of verbal information a deaf student receives. A presentation of captions alone serves as effectively as combined communication-mode formats. On the other hand, it is interesting that visual channel overloading did not seem to occur in those instances in which deaf students were presented with combined communication-mode formats. The presentation of information by a speaker and/or a manual language translator together with captions does not appear to interfere with the reception of that information by deaf viewers of the presentations. This is most interesting in light of findings reported by von Mondfrans and Travers (1964) that sensory overloading can occur when *dual channel* presentations are made. It appears, within the context of this study, that similar overloading problems are not the case when information is presented via the *visual channel alone in multiple-mode formats.*

Part III: Discussion

The use of captions to present the verbal information selected for this study showed clear advantages over the use of speech or manual communication as visual communication forms. The presence or absence of speech or manual communication with the captions made little or no difference.

Students who were called on to read speech, manual communication, or both, gained remarkably little information from the television format. Those who had the opportunity to read the information in print performed considerably better within the same time frame.

A. Direct implications

The most immediate implication of this study relates to the student population involved in the study itself. When deaf students are presented verbal information in televised form this information should, where possible, be captioned. The videotaped speaker, or the videotaped manual interpreter, may have limited value as a means of presenting verbal information to the deaf viewer.

The activities of Captioned Films for the Deaf of the Bureau of Education for the Handicapped of the U.S. Office of Education, both in their support to the captioning of educational and entertainment films for deaf students and adults nationally, and in their support of projects which are exploring ways of captioning television programming, should be encouraged.

To the extent that it is feasible, deaf students should be offered verbal information in graphic form. If deaf students gain information from reading televised captions, they should no less be able to read similar material in print. Print can take the form of such prepared graphics as textbooks, duplicated materials, course outlines, and other forms. Programmed and computer-assisted instruction, for example, offer the opportunity for deaf students to read directly from graphically presented materials which are in an instructional format.

B. Indirect implications

The treatment materials used in this investigation were pre-prepared. That is to say, they were developed beforehand for presentation at a later date. What does this study imply for the classroom setting where the teacher cannot "script" every item of verbal information in advance?

There are ways in which the teacher can present verbal information graphically to his or her students virtually in real-time. Indeed, most teachers already do, whether they identify with "oralism", "the simultaneous method", or with the as yet inadequately defined school, "total communication". Most teachers of the deaf make generous use of the chalkboard. All assign readings in text and workbooks. All develop work sheets. The importance of charts is very well known to the teacher of the deaf. Many use the overhead projector for "real-time" presentation, employing transparencies and marking pencils. The Mediated Interaction Visual Response system (Wyman, 1968) to present and monitor information graphically, and other such efforts, all implicitly or explicitly suggest that deaf students receive information which is presented graphically.

The findings of this study lead me to speculate upon whether one should not consider a "graphic" method, not as an insurgent, but rather as a method already very much in use.

Is there in fact an "oral" method? Is there in fact a "simultaneous" method? The investigation just described suggests that the presentation of verbal information in graphic form to a deaf student may account for most of the verbal information he receives, as opposed to information that must be speechread or obtained through manual communication. The above questions can be carried a step further. What is the relative amount of time which an "oral" or a "simultaneous" teacher gives to presenting verbal information to the deaf student in graphic form? How much instructional time does the teacher using either method devote to use of the chalkboard, the overhead projector, captioned films and filmstrips, prepared passouts, workbooks, and textbooks? It is possible that teachers using both methods are presenting verbal information graphically to a greater extent than they realize, but yet are not using it to the maximum advantage.

Deaf students graduate or leave both oral and simultaneous environments with similarly depressed educational achievement. There could be a common, fundamental element operating in both methods (which is the presentation of verbal information graphically), which is hidden by the preoccupation of many educators of the deaf with defense of the oral method or the simultaneous method as modes of conveying verbal information. And because of this traditional dichotomy, graphic means of presenting information do not receive the close attention and emphasis which is necessary for maximum effectiveness. Total communication would appear to have incorporated the "graphic approach" within its conceptual framework, but its recognition hangs dangerously close to nil because of an emphasis on defense of manual communication as an integrated part of the concept of total communication.

Stronger emphasis should be placed upon reading development, with this emphasis beginning very early in the deaf child's educational experience and extending throughout his academic career. Basic to emphasis at an earlier age on reading development is the need for an investigation of the preschool deaf child's capacity to receive and code verbal information presented in graphic form. It is sufficient to say that we have not yet cultivated reading and the teaching of reading to the point that it has become an important part of the communicative repertoire of the deaf student generally.

Another implication deals with the application of technology to education of the deaf. Is current technology capable of offering teachers of the deaf systems which would permit presentation of verbal information graphically in real-time? For example, does computer technology have the capability of translating speech into its graphic counterpart so that this graphic information can be presented simultaneously with the oral presentation? The rapid advances in computer technology made during the past decade make the prospects for positive answers to this question optimistic. The application of such technological innovations within education of the deaf might have far-reaching implications. For example, we are close to the point where a stenographic machine can be interfaced with a computer which will convert the symbol code of the machine into "written" language and display it as captions on a television screen. Such a transition from speech to written language could occur with a time delay of less than two seconds. The implications of such "real-time" transition of spontaneous verbal utterances into their graphic equivalents are far-reaching in regard to education of the deaf.

C. *Some additional questions*

Does the nature of the subject matter (e.g. history vs. science) influence the amount of verbal information a deaf student receives through a particular mode of communication?

Does the level of complexity (e.g. concrete vs. abstract) of the information influence the amount of verbal information a deaf student receives through a particular mode of communication?

Is the amount of verbal information received by deaf students influenced by presenting the information in one mode (e.g. manual communication) and measuring its reception in a second mode (e.g., graphically)?

How does the reading ability of the deaf student interact with the amount of verbal information he can receive through captions?

Does the amount of verbal information received by deaf students differ when the information is presented "live" in a particular communication mode and via television in the same mode?

Does the use of a simultaneous communicator (one individual speaking and using manual communication simultaneously) result in greater reception of verbal information by deaf students than a manual communicator and a speaker on a "split" television screen?

D. A word of caution

I would be remiss if I did not remind you of some of the limitations of this investigation. The question of how best to present verbal information to deaf students is so central to their education and the focus of so much debate among educators of the deaf that the individual may be tempted either to dismiss or to overgeneralize on the results. This study can and should be criticized like any other research endeavor, so long as it is criticized for valid reasons. However, I hope that you will not interpret my remarks (and this study's findings) as the rationale for and as a plea to do a better job of teaching the deaf student to read. The implications of this research extend to a deeper extent philosophically.

In closing, I would like to review for you again that the population utilized in this experiment were students who had been admitted to a post-secondary program for the deaf. The admission records of these students showed them to be average or above in intelligence. These students also displayed reading abilities of approximately seventh grade level and above.

The particular presentation of verbal information incorporated into the study consisted of a narrative passage which was predetermined to be at the sixth to seventh grade level of reading difficulty. There was no aural input of information; thus no cues from residual hearing were available. The treatments were presented in black and white by way of television. Therefore, the visual elements of color and a third-dimension were eliminated. Color and the third dimension may be important to speechreading and/or reception of manual communication.

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THREE YEARS OF THE TOTAL APPROACH—1968–71

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On September 19, 1968, the Santa Ana Register gave a whole page to a new program for teaching the deaf located within the city. The headline of this article was "New Program May Shatter Tradition in Teaching Deaf." Since the write-up in the Santa Ana Register, there have been a number of other sources giving recognition to the Santa Ana District for originating the Total Approach and/or the Total Communication movements in America. Some of these sources follow:

Jim Cooper, *CBS Television*, Fall, 1968.

Milt Brouhard, *The Los Angeles Times*, November 17, 1968, Section L, Pages 1, 14–16.

The Deaf American, (Indianapolis, Indiana) April, 1969, Pages 9–11.
Donald F. Moores, *Education of the Deaf in the United States.* University of Minnesota, November, 1970, Page 31.
The Deaf American, Volume 23, No. 6, February 1971, Page 34.
The Deaf Spectrum, (Beaverton, Oregon) April, 1971, Volume 2, No. 4, Page 13.
The Endeavor, (Washington, D.C.) Volume 2, No. 2, Spring 1971, Page 1.

The new program has also been explained during several television appearances, in two documentary films, and at numerous speaking engagements. Perhaps it is in order at this time for the Santa Ana story to be told more fully. Not only the Santa Ana story but the results of the three years of instructing deaf children via the Total Approach since an ever increasing number of people are requesting the same. First a few words about the education of the deaf prior to The Total Approach.

EDUCATION PRIOR TO THE TOTAL APPROACH

The education of the deaf in America for pre-school and elementary children has been strictly oral, without exception, for many years. Contrary to public opinion the residential and state schools have been as oral or more so for pre-school and elementary school children than the day schools. Only in recent times have a few schools experimented with fingerspelling to be used along with speech and speechreading. No one has dared to teach the deaf as the great majority of the deaf themselves believed it should be done, i.e. using all means of communication and especially the language of signs. For many years oral education has been the means of instruction despite the well known facts that:

1. Only a small percentage of the spoken word is visible on the lips.
2. After many years of training the speech of the great majority of the deaf cannot be understood outside of the family or outside of the classroom.
3. Most deaf people use the language of signs in latter years and especially after they leave school.
4. Many research studies show that the language of signs does not hurt speech and speechreading.
5. Only five percent of the "graduates" of our schools achieve a tenth grade education or better. (Yet nearly all research shows that the deaf have normal intelligence.)

THE SANTA ANA PROGRAM FOR THE HEARING IMPAIRED

The Santa Ana Program for the Hearing Impaired is the oldest program of its kind in Orange County. It serves children from 3 through 12 years of age from 15 school districts, mostly in southern Orange County. The first teachers in the program were the Fitzgerald Sisters, one of whom invented the Fitzgerald Key elsewhere. The Santa Ana Program was established in 1948 as an oral program and attempted instruction wholly by oral means until 1968 when it changed to The Total Approach. The Total Approach is using everything and anything that will help the children here and now. Among the many factors which make up The Total Approach are the parents, the hearing children, the community, extra curricular activities, the curriculum, the teacher, and Total Communication. Total Communication is using all means of communication with the children, especially at the earliest possible age. Total Communication as used in the Santa Ana Program consists of auditory training, speech, speechreading, fingerspelling, and the language of signs. The signs as used in the Santa Ana Program consist of combinations of old signs, S.E.E. (Seeing Essential English) signs, and new signs made up by the hearing impaired staff at the school. The new signs are made around the basic old signs using the first letter of the word. For example, all signs referring to eat or food would be made at the side of the mouth using the first letter of the word. Some examples of these words would be eat, food, grocery, breakfast, lunch, dinner, supper, etc. Signs are made at the side of the mouth in order to reinforce and supplement speechreading. While all things used in the Total Approach are vital, Total Communication is basic. This is true because the deaf child must see what the hearing child hears if he is to have every opportunity to realize his potentials for full growth.

How It All Started in Santa Ana

During the summer of 1968, the Santa Ana Unified School District established a new position as area supervisor of its program for the hearing impaired. This position was offered to Mr. Roy K. Holcomb, then a member of the Leadership Training Program in the Area of the Deaf at San Fernando Valley State College at Northridge, California. Mr. Holcomb, himself deaf, was a strong advocate of all means of communication for the deaf. Two of his most widely quoted sayings are "Communicate with the deaf in any way you can —stand on your head, if necessary." and the deaf need "Everything and then some." The last slogan was adopted as his class' motto. Mr. Holcomb hit upon the terminologies "Total Approach" and "Total Communication" from a supermarket slogan advertising Total Discounts. The plans for the Total Approach were written up in 1967 while Mr. Holcomb was a member of the staff at the Indiana School for the Deaf in Indianapolis. The plans were first discussed with Dr. Ray Jones and Dr. Lloyd Johns, faculty members of the Leadership Training Program in the Area of the Deaf in 1968, before being put into operation at the start of the 1968–69 school year in Santa Ana.

The first year

All of the parents and teachers were told prior to the opening of school that the Total Approach would be the new method of instruction for all classes and children in the Hearing Impaired Program. Two new teachers, both of whom were already familiar with Total Communication, instructed the other teachers prior to the opening of school. Classes in Total Communication were immediately set up for the parents, hearing children, and people in the community at large. The speech of all of the children was put on tape right at the beginning. The children were given various achievement and other tests by which they could be evaluated. Testing has continued over the past three years.

Visitors

From the beginning visitors from all over the country, Canada, and Europe have come to observe the program. These visitors have just about doubled each year. During the third year, 1970–71, it was a rare day when there were no visitors. Many of the visitors had heard of the program by word of mouth while others had read about it in various publications or seen it on television. Many of the visitors were quick to point out that the children here seemed to be so much happier than in other schools that they had visited. Other comments made by visitors, who were educators and/or authorities on the education of the deaf, were:

1. There seemed to be a great deal of communication among the children themselves.
2. The children seemed to vocalize and attempt to talk more.
3. Many of the children were reading and learning beyond even what hearing children were doing at the same age level.
4. The teachers were out of this world and especially dedicated to their jobs.
5. The hearing children integrated very well with the deaf children, especially those who knew Total Communication.

The most common questions asked by visitors were:

1. How was the Total Approach sold to the district, the parents, and to the teachers?

Mr. Howard Harrison, former personnel director and now associate superintendent was the first person in Santa Ana to hear of the Total Approach. Mr. Harrison had worked with the program for the deaf previously. He saw merit in the new plan and offered Mr. Holcomb the opportunity to try it out in Santa Ana. However, before Mr. Holcomb took the job he talked with the parents and gave them the opportunity to accept or reject the new method. The parents wanted it and the teachers went along with the parents and the district.

2. Does the language of signs hurt speech?

Every indication is that it helps.

3. Do the parents of the hearing children object to their children learning the language of signs?

No, they think it is wonderful. There has not been one complaint from the parents of the hearing children in three years.

Activities over the last three years

The last three years have been busy years for everyone involved with the Total Approach. These years have also been most exciting ones. Below we have listed a few of the many activities that have occurred.

1. A panel of 11 deaf adults opened the first meeting of the Santa Ana Guild for the Deaf during the 1968–69 school year. This was a milestone for the deaf being involved in the education of the deaf in the Santa Ana School District.

2. In 1968, two teletypes were installed at the school. One was placed in a class for deaf children and the other in a class for hearing children. Then for the first time the deaf and the hearing could communicate with each other via "wires". Much of the hearing world was brought to the deaf world via the teletypes.

3. Extra curricular activities were sponsored by volunteers from the community. Activities that the community have helped with are ballet, art, gymnastics, and Indian Guide. Others were used in classrooms to help the teachers as needed.

4. Integration with interpreting services were provided for the primary and elementary children going into classes with regular hearing children. All programs, movies, and television programs were interpreted for all children.

5. The Santa Ana Guild for the Deaf had two benefit shows. Nearly 1,000 people came the first year and nearly 2,000 the second year.

6. Large portions of both documentary films, "Never To Hear the Wind" and "Deaf Children" were filmed at our school.

7. Daily lessons for the pre-school and kindergarten children were sent home in the language of signs so that the parents could reinforce the children's learning even when they did not understand their speech.

8. Workshops on the Total Approach were sponsored for those from other schools requesting the same.

EVALUATION

Testing [1]

All of the older children have been given achievement tests since the start of the new program. One noticeable observation of the testing program was that younger children were able to be tested each year. At the beginning it was most difficult to test even the older children (10–12 year olds) as communication to explain the simplest directions was lacking. Below are the California Achievement Test results of the 10 oldest students:

Student	Age (1971)	1968	1969	1970	1971
A	12	1.5	1.6	3.6	3.9
B	12	3.2	3.7	3.9	5.0
C	9	----------	1.1	1.4	1.9
D	9	----------	1.1	1.4	2.0
E	13	1.7	1.8	3.4	3.4
F	12	3.5	3.6	4.0	5.2
G	12	1.7	1.8	3.7	3.9
H	9	----------	1.4	2.3	4.3
I	8	----------	----------	1.9	3.1
J	11	4.4	4.8	5.6	6.5

Three of the above children were Mexican-American where little or no English was spoken in the home. Another child was Korean. All except one child was born deaf. One of the Mexican-American children became deaf at five from spinal meningitis. The hearing loss of the children was mostly profound. The intelligence range of the children was mostly average. The child who scored highest had deaf parents and had used *Total Communication since he was a baby.*

While most of the older children have made progress over the last three years with the Total Approach, every indication is that the children who started out with the Total Approach from the very beginning will do even better. Psychologists state that some eighty percent of all learning takes place before a child is eight years of age. Taking this into account the Total Approach gives very young children every opportunity to make it during their prime years of learning.

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[1] The reader should be aware that some studies show that the average deaf high school "graduate" only reaches a third grade reading level and a fifth grade overall achievement.

Last winter testing was conducted on the first class using Total Approach from the beginning. The children were in their third year of school having started when they were 3 years of age. There were 6 children in the class, all of whom were 5 years of age at the beginning of this school year. The children were tested with the Stanford Achievement Test; Primary Battery, as distributed and scored by the Office of Demographic Studies at Gallaudet College. Results follow:

Student	Word reading	Paragraph meaning	Vocabulary	Spelling	Arithmetic	Average
A	2.2	1.8	1.3	2.6	1.2	1.8
B	1.0	1.6	1.4	1.0	1.3	1.3
C	1.4	1.5	1.2	1.1	1.3	1.3
D	1.7	1.8	1.4	1.0	1.1	1.4
E	1.6	1.7	1.2	(*)	1.2	1.4
F	1.6	1.5	1.4	2.1	1.1	1.5

*Child was upset. Did not attempt to test this part.

It is noted that the present performance of many of the other pre-school children in the classroom indicate that they should score as well or better than the first class above.

Teachers

There are 10 teachers on the staff in the program for the Hearing Impaired at the James Madison School. All of the teachers were trained to teach via the oral method. Most of the teachers have taught in oral programs around the country. Several of the teachers had strong speech backgrounds from various universities. The teachers made the statements below about the Total Approach as compared to the oral method alone:

1. It is more effective for teaching the abstract.
2. It is more effective for teaching vocabulary and language.
3. It promotes more communication between adults and children in greater depth.
4. It is more effective for teaching new concepts.
5. It cuts down on repetition.
6. It promotes more positive attitude from the parents. It gives them something tangible to work with where they can see good results immediately.
7. The Total Approach is also more effective for holding the attention and the interest of the children.
8. It appears to be more effective in establishing teacher-pupil rapport and developing a cohesive class.
9. It allows for a broader and more detailed curriculum development.
10. It is more effective for encouraging feedback and participation from the children.

11. It is more effective for encouraging interaction and communication among the children.

12. It permits the deaf child to follow more closely the academic curriculum of his hearing peers.

13. It gives more support to the current theory of progressive inclusion by affording more opportunity for integration of the deaf child with the hearing world.

14. It helps children follow events surrounding them with understanding.

15. It decreases a completely teacher-oriented atmosphere and lets the children "lead" each other.

16. The establishment of communication and mutual understanding reduces behavioral problems due to frustration, misunderstanding, and lack of understanding.

17. All children are given an education and are not penalized by lack of speechreading ability or intelligible speech.

Parents of the deaf children

During the past three years of the Total Approach not one parent has left the program because of it. During the spring of 1970 parents were given the option of sending their children to an oral program. Questionnaires were sent to the parents of all 46 children[1] then in the program. One hundred percent of the questionnaires were returned and 100 percent of the parents chose the Total Approach over the oral program.

Parents of the hearing children

The parents of the hearing children in the program with the hearing impaired think it is just great that their children learn the language of signs. The parents have always given their permission for their children to play, attend special programs and affairs for the deaf, and to interact with the deaf children in numerous ways. During the past three years of the Total Approach in Santa Ana there has not been a single complaint from a parent of hearing children in regard to the deaf children.

Hearing children

If visitors should see children using the language of signs in the Santa Ana Program they should not make hasty judgements and label these children as deaf. They may be hearing as there are a number of hearing children who can sign as well or better than the deaf children themselves. But, then, why not? The hearing children have a larger vocabulary as well as more and better language. In any case, at P.T.A. meetings, Christmas, Easter, benefits, and other times hearing children join with the deaf children in singing songs, doing the pledge of allegiance as well as other activities. Some of the hearing children have invited deaf children to church, outings, parties, and other social activities and have made them feel very comfortable by interpreting for them. With the Total Approach deafness is no longer a thing unknown. One little hearing girl who had to move to another school out of the district wrote back and said that she did not like her new school because there were no deaf children there.

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[1] Children were from 3 to 11 years of age. The great majority were under 6 years of age.

Many of the hearing children have stated that when they grew up they were going to work with the deaf.

Speech

The speech of all deaf children has been put on tape every year since the beginning of the Total Approach. During the spring of 1971 the tapes were judged by two objective non-teacher evaluators who did not know the children intimately. These judges reported that the speech of all children except two showed improvement.

Speechreading (lipreading)

The speechreading skills of the children seem to have improved even more than the speech. The children now have so much more knowledge with which to understand speechreading. At least this seems to be the case in the classroom where the children can now understand many things even when the language of signs is absent.

Psychological

During the fall of 1970, Barbara Rossier, a Santa Ana Unified School District psychologist, after talking with authorities on the education of the deaf around the country via phone, devised an oral-total test by which to evaluate the children. Mrs. Rossier retested the children again at the end of the school year. At this time she is compiling the results of her testing.

Principal

Mr. Kenneth Pruitt was the principal of the school in the Santa Ana District which serves the hearing impaired children before the change to the Total Approach and continues in that capacity. Below follows a report from him.

> It has been my observation that since we have embarked on the Total Approach at Madison School, there has been a marked change for the better in the behavior of the deaf child. Before the Total Approach, deaf children were extremely physical in their behavior toward others. They were defensive and accusative. Their behavior, sometimes, was considered strange by hearing children. However, after the children had received instructions in sign language and fingerspelling, they were able to communicate effectively with each other, thereby, changing their behavior to a more acceptable standard. Disciplinary problems all but disappeared. The hearing child was also provided with a means of communication if he desired to learn the sign language, which many chose to do. Along with this, came many opportunities to intergrate deaf students into the regular school and many friendships developed between deaf and hearing students. Friendships among the deaf children became more meaningful.

PROBLEMS

The reader will, no doubt, wish to know of some of the problems encountered in changing from an oral program to Total Approach. Below are listed a few of the most significant problems and how they were handled.

1. The first problem was to convince the parents that many of the things that they had heard in the past were misleading. Exposing the parents to deaf adults as well as to existing research in the field helped the parents tremendously to get a better understanding of deafness as such.

2. A second problem was to provide the parents with opportunities to learn Total Communication. Classes were set up for the parents

on Thursday evenings. Books on the sign language were purchased for the school library. The lessons of the younger children in the sign language were sent home daily. Conferences were set up for the parents who wanted to know more about Total Communication.

3. A third problem was to take care of the many children who moved into the district for the Total Approach. At this time we have one room with four classes in it. Fortunately, a new school is being built to enable the district to adequately serve all children in the future.

4. A fourth problem was to help the deaf and the hearing children live with each other in the best possible manner. Integrating both ways, i.e. deaf with the hearing and vice versa, has helped. Classes in Total Communication have helped both groups to understand and to live with one another better in every way. (See Principal's report for more on this).

5. A fifth problem was how to handle the many visitors who came to see the program without having them interrupt the classes too much. This problem has still not been solved but with our new school we hope to have some one-way windows.

Conclusion

The great majority of the deaf people in this country have long believed in teaching the deaf by any and all means that might be beneficial, i.e. a Total Approach. After evaluation of the three years of the Total Approach in Santa Ana we find the results very impressive. Every indication is that progress will be even better in the years ahead with the children who started out from the very beginning with the Total Approach.

THE TOTAL APPROACH

John Prince, M.D., Parent, Santa Ana School District

When Mr. Holcomb asked me to speak, representing the parents of a deaf child in his "total approach" program, to a group so much more knowledgable than I in deaf education, I felt somewhat as Zsa Zsa Gabor's eighth husband must have on the occasion of their wedding night . . . Relatively sure of what was required, but somewhat of a loss as to how to make it interesting and different.

So I shall begin at the beginning. Our oldest son was born after a pregnancy in which I infected my wife with rubella at eleven weeks of gestation. As you can well imagine, it was a difficult pregnancy for both of us because being a physician I had the rather dubious advantage of knowing the many possible dangers German measles could cause the fetus at such a stage of development. In spite of this being optimistic as are all expectant parents we hoped for a child unaffected by the virus.

At birth, our boy was pronounced normal by his pediatrician only emphasizing that even with the highest degree of suspicion audiologic testing is best done solely by experts in the field. My wife and I, hardly experts, but having the advantage of twenty-four hour a day observation (and with a newborn it may well be a twenty-four hour job) knew for certain that he could not hear by the time he was two weeks old.

During that time what futile attempts we made to produce noises he might respond to. Ofttimes trying to be inconspicuous to each other my wife or I would drop pots and pans all the while hoping for a response from our ever quiet peaceful newborn boy.

Then the stark realization that he was really deaf . . . could hear nothing. Immediately came the sudden awareness that our son would never hear us tell him we loved him, would never appreciate a bubbling brook, the roaring surf, or a crackling fire. Nor would he hear manmade sounds—the roar of a jet at takeoff, the thump of a ripe watermelon, the beauty of a full orchestra . . . church bells, Christmas carols. None of these things . . . no, not even the name we had so carefully chosen for him, would he ever hear.

And then the much less obvious but more consequential facts that all early training is based upon spoken language, that learning letters, words, thoughts, emotions, and communication with other human beings stems around sound and its appreciation and production in meaningful form.

At three weeks of age, our boy was evaluated by an audiologist at our Children's Hospital. Fortunately, this woman was extremely understanding and knowledgable both as a hearing specialist and as a mother. Many of the things she told us have stood us in good stead over the last three years. Our child was classified as profoundly deaf and was fitted with an aid before he was two and one-half months old.

About this time, I happened to see an anouncement regarding a night school course in sign language. We began late in the school year and never finished the course because we were directed by well meaning individuals to a large clinic for deaf children in Los Angeles—orally oriented and very much against signs.

So knowing no better, we threw ourselves headlong into the program including the correspondence course, the demonstration home, and the weekly parent classes. No group could be better motivated or more devoted to helping deaf children and their parents, but it soon became apparent to us that by stifling methods of visual communication other than deadpan lipreading (which the clinic not only advocated but demanded) we were rapidly losing ground with our little boy and ourselves.

And if you can imagine attempting to stop a windmill from turning in a gale, you might get an idea of how hard it was to get my wife to stop using hand gestures while speaking. She has always been one for gesticulating for emphasis. I think this is a product of her Baptist upbringing.

I shall not belabor you with the strict and stereotyped methods of instruction we were taught to use as you are, I am sure, aware of the techniques. But I do want to stress how frustrated we and our boy were becoming . . . and in spite of their proposed purpose to the contrary . . . how more depressed we would become after each parent class.

We also found ourselves wondering why whenever we would see students who had gone through the program, they used signs and gestures when speaking with one another. When asked they always said they had to learn signs later—often times on their own.

With the next school year, our son, who was just under two, was to begin the nursery school. However, we were so disenchanted by that time that when an alternative appeared in the form of a pilot project assessing teaching techniques for deaf and otherwise handicapped children, we jumped at the chance. My wife and I continued the parent classes for about another year.

These were very trying times for our family. My son for instance, knowing only the words for a couple of toys might sit in front of the refrigerator crying for something to eat and my wife might nearly empty the refrigerator before getting to the thing he wanted. We also felt guilty teasing and taunting him for a response when we felt intuitively that even with primative gestures we could have achieved more communication than we were.

So you can see that long before we heard of Roy Holcomb or "total communication" we were dissatisfied with strict oralism. After I contacted Roy Holcomb, he responded in such an enthusiastic manner we will never forget it. He came over to the house and stayed all evening.

He rocked us back on our heels. He implied that our son was retarded because he couldn't communicate with us, and said he had been communicating with his two deaf sons from the day they each came home from the hospital.

He challenged us to ask how our son could conceptualize ideas or thoughts without appropriate labels. He asked how we expected our son would ever be stimulated to think or desire to communicate if he only knew a few basic words such as "ball" or "shoe". He provided us with the results of Dr. Elwood Stevenson's report from the California School for the Deaf at Berkeley showing that only nine percent of their deaf children with hearing parents went to college whereas 38 percent (or more than four times as many) deaf children with deaf parents went to college.

Obviously, the difference was communication between parents and child from infancy. In short, he really set us thinking . . . and yet optimistically so. Within two weeks, we were learning signs at night again. Using them of course with all of our previous methods of teaching.

Our son was too young for the summer program last year and still too young to start with the fall term but we were still determined to get him started with the "total approach." When he turned three and could begin in school, he was able to fit in well with an existing class.

Then what happened. Within a few weeks of beginning total communication, our son became a happier and less frustrated little boy as did my wife and I. We found we were able to communicate about everyday affairs and occurances, wishes and dislikes.

Seemingly all parameters of his educational and social progress improved. Does that mean lipreading too?

Well we no longer call it lipreading, but speech reading, for we now realize one does not (unless under abnormally imposed situations) speak visibly only with his lips but with his whole facade . . . Our son's speech reading has improved considerably. It is, of course, impossible to know how he would have progressed without the advantages of total communication but as objectively as I can tell, its inclusion has been very beneficial.

This is also true of his speech. He spoke no words prior to beginning total communication and now says about ten words well enough to be understood. Again, I feel his improvement is due to total communication. Mr. Holcomb will review more objective, tabulated evaluations of the results in his report to follow.

The total approach will not make our child normal. On the contrary, it accepts his handicap and helps him to overcome it, but nothing can remove it. I feel those who force their profoundly deaf children to try to be oral only so they may "live in a hearing world" are deluding themselves and are severely hindering their children's progress. Deaf adults know this and fortunately through the sharing of information afforded by conventions such as this many others are learning it also.

Educational Media—ASB Auditorium

10:30 a.m.–4:00 p.m.: *Chairman:* Dr. Gilbert L. Delgado, Chief, Media Services and Captioned Films, Bureau of Education for the Handicapped. Captioned Films.
10:35 a.m.: Opening Remarks, Dr. Gilbert L. Delgado, Chief, Media Services and
10:45 a.m.: "*It Makes A Difference: A Multi-media Presentation of Media Activities in the field*," Dr. William Jackson and staff, Southern Regional Media Center, Knoxville, Tenn.
11:30 a.m.: "*Media Specialist Program—University of Massachusetts*," Miss Anita Nourse, Coordinator.
11:45 a.m.: "*A Doctoral Program at Syracuse University in Instructional Technology for Education of the Deaf*," Mr. James Achtzehn, Syracuse University.
1:30 p.m.: "*The Special Education IMC/RMC Network: An Overview and Emphasis on Resources Available to Educators of the Hearing Impaired*," Dr. Philip Newburg, Assistant Executive Director and Coordinator, IMC/RMC Network, Arlington, Va.
2:00 p.m.: "*Project ME (Media for the Exceptional)*," Dr. Sol Roshal, Director, Dubnoff School for Educational Therapy, North Hollywood, Calif.
2:40 p.m.: "*Computer Based Project—Syracuse City Schools Program*," Dr. Bernice Kipfer, Syracuse, N.Y., City Schools District.
3:30 p.m.: "*Concluding Remarks*," Dr. Gilbert L. Delgado.

OPENING REMARKS

Gilbert L. Delgado, Ph. D., Chief, Media Services and Captioned Films, Division of Educational Services, Bureau of Education for the Handicapped, Office of Education, U.S. Department of Health, Education, and Welfare, Washington, D.C.

The theme, "Media Developments in Special Education," has been chosen for a number of reasons:

1. Highlights of media activities in the area of the deaf will be presented, followed by descriptions of two graduate-level programs

in deaf education/instructional technology. Then the theme will be broadened.

2. Since expansion of the Captioned Films for the Deaf Act to include other areas of the handicapped, we have engaged in some rather interesting projects which appear to have implications for the deaf learner. You will hear about two such programs in today's presentations.

3. There are ongoing regional and national activities related to media or instructional materials which are resources for you as educators of the deaf. We want to inform you about these resources.

4. Although the term "media" is used in its most generic sense, we prefer to consider it a component of educational technology. A capsulized definition of educational technology would state that it is the exertion of all human and nonhuman resources to impact on the learner.

Thus, today's program will try to highlight various examples that exist or can be included within the larger rubric of instructional systems.

As some of you may know, there has been a major breakthrough for the handicapped at the national level. For the first time in the history of education in this country, the federal government has made an official commitment to education of the handicapped. In April of this year at the CEC Convention, Dr. Sidney P. Marland, Jr., United States Commissioner of Education, announced the education of handicapped children as a major priority. Rather than elaborate on the implications of this priority, let us hear it directly from Dr. Martin and Commissioner Marland.

SCRIPT FROM 16MM FILM

Dr. MARTIN. I am Edwin W. Martin, Associate Commissioner for the Education of the Handicapped. I am going to introduce Dr. Sidney P. Marland, Jr., United States Commissioner of Education. For two decades, Dr. Marland has served the cause of education as a teacher, an administrator, and a planner. He has established a nationwide reputation as a man of creativity and innovation, a man who gets things done—and as a man concerned with individual human beings. He is the first Commissioner of Education to declare that the education of handicapped children is a major priority of the United States. With pride, I introduce Dr. Marland.

Dr. MARLAND. Thank you, Ed, for the complimentary introduction. I wish I could be with you in person to talk about the Office of Education's programs to assist handicapped children.

As Commissioner of Education, I formulated 5 major objectives for the operation of the U. S. Office of Education during FY 1972:

1. The provision of career education to all who can benefit;
2. The provision of quality education and equality of educational opportunity for disadvantaged children;
3. The elimination of racial and cultural isolation;

4. Innovation and renewal wherever they can strengthen our educational system; and
5. Appropriately designed education for more handicapped children.

These objectives represent the aspirations of the United States Office of Education. We are optimistic that over the next several years these objectives will become realities for the American people.

In the area of education of the handicapped, we have set certain specific standards for fiscal year 1972 in full knowledge that what we do now will only be a start in eventually achieving full educational opportunity for all handicapped children. Using our present resources there are several things we believe we can achieve:

1. Launch the National Goal for Education of the Handicapped. This goal has as its basis the development of an integrated federal, state, and local program for providing a full range of health, education, and social services to the handicapped.
2. Assure that an additional 250,000 schoolage children will be served in appropriate educational programs which will provide them with needed skills to acquire self-sufficiency and meaningful participation in society. This year's efforts in combination with the state and local governments will raise the number of handicapped children served to nearly 3 million.
3. Assure that an additional 250,000 handicapped children, who are already receiving special education, become involved in appropriately designed career education programs and have placement and employment services that pave the way to meaningful career opportunities. This must be done for handicapped children, as well as for all children, in order to bring greater meaning and relevance to their lives and to expand their horizons for learning.
4. Produce in 1972, through our university and college training programs, 17,000 trained teachers and a supply of teacher trainers and leadership personnel to support the infusion into our school system of the additional quarter of a million children. Efforts will be made to train 12,000 regular education teachers to work with handicapped children in regular classrooms. Despite teacher surpluses in other areas, special education has been and will remain, unless diligent efforts are made, a severe manpower shortage area.
5. As a cooperative effort with other federal agencies working with early childhood educational and day care programs, we will secure the placement of 100,000 handicapped children in suitable programs. The Office of Education will make every effort to develop and stimulate the growth across the country of preventative programs that may ameliorate the educational and social effects of handicapping conditions in the more than 1 million handicapped preschoolers. We will pro-

vide training programs for teachers to help accomplish this objective.

I know that instead of adding 250,000 children to the school rolls in a year, we should be adding 2½ million, but resources currently available do not permit such rapid expansion. As the federal-state partnership grows through comprehensive planning, and as programs prove their effectiveness in the lives of handicapped children, we would hope to see more resources made available.

The problems of the handicapped are not exclusively the responsibility of the Bureau of Education for the Handicapped or even of the Office of Education. In the months ahead we will be making attempts to combine our funds with other agencies who are devoted to the cause of normalizing the lives of handicapped children and removing the catastrophic burden from the shoulders of individual parents.

As we, together, formulate these plans and set about their fulfillment, I continue to be mindful that while appointed officials come and go, the ongoing work and the major burdens of continuity and forward movement rest upon you who have committed your lives and careers to this purpose of educating and caring for the handicapped.

Let us work together for the handicapped ever looking toward the human objective Thomas Carlyle defined:

> Let each become all that he was created capable of being: expand, if possible, to his full growth and show himself at length in his own shape and stature, be these what they may.

Dr. Martin: You have just heard Dr. Sidney P. Marland, Jr., United States Commissioner of Education, define his educational priorities and specifically those related to the education of the handicapped children.

Dr. Marland has given us a chart to follow as we set a new course toward new horizons in the education of the handicapped. Let us all work together—men and women in federal, state, and local governments; men and women who serve the handicapped through their voluntary organizations; parents; and those important people who care about what happens to children in their own home towns.

Working together during this decade and using enough of our society's resources, surely we can achieve a goal never before undertaken by any society in the history of the world—that all handicapped children in this country will receive full educational opportunity to reach their maximum potential and attain rewarding, satisfying lives.

It Makes a Difference: A Multimedia Presentation of Activities in the Field

William D. Jackson, Ed.D., Director, Southern Regional Media Center for the Deaf,* University of Tennessee, Knoxville

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*A project of Media Services and Captioned Films Branch, Bureau of Education for the Handicapped, Office of Education, United States Department of Health, Education, and Welfare, Washington, D.C. in cooperation with the Department of Special Education and Rehabilitation, College of Education, The University of Tennessee, Knoxville.

A child born with all speech and hearing organs appears to be normal in his growth and development.

He may come from any home, look and act like the child next door -- playing, eating, sleeping, enjoying life.

There is a difference, however. This child is deaf. He, like thousands of other children, will never know the thrill of hearing his name or the joy and excitement of sounds we take for granted.

In other respects, the deaf child is like all children everywhere.

He has likes and dislikes; tastes and attitudes; appreciations, joys and fears; feelings and ambitions.

He is full of love, and expresses himself with a wide range of emotions and behavior not unlike that of hearing peers.

The child who is deaf is first of all a child.

What is done for him and with him is very important, but it is how we do it that makes a difference.

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"Happiness is like a crystal,
Fair, exquisite and clear -
Broken in a million pieces,
Scattered far and near . . .

Now and then along life's pathway
Some shining fragments fall,
But there are so many pieces
No one ever finds them all."

This nation has long been aware of its millions of handicapped children. For many decades, it has known about their special educational, social, and emotional needs.

But awareness alone does not meet needs. Needs must be met by action!

Life is action, movement -- but not without direction or meaning.

The total message of a motion picture depends on the meaning of the visual action defined by sound.

But when sound is denied a deaf viewer, film becomes nothing more than floating images.

The thrill of seeing the unexpected, real or imaginary images in living color with sterophonic sound and widescreen projection, is an unforgettable experience. Can you imagine what a deaf viewer must feel?

The educational value of the motion picture has long been recognized, but not for the deaf. Several decades passed before a practical way was found to provide motion pictures for deaf consumers.

From this necessity, Captioned Films for the Deaf was born in the United States Office of Education. By late 1959, feature-length Captioned Films were being distributed nationwide.

This free distribution service to deaf clubs and organizations expanded to three regional film libraries with more than 500 titles and a viewing audience in the thousands.

Suddenly in 1963, education became the front line of defense in America's rapidly changing society. Sputnik launched a major effort to fill the void of neglect and public apathy toward education.

It was obvious that conventional methods of instruction had not been adequate. A bold new approach was required.

This jarring realization focused attention on the needs of the handicapped. Funds were made available with a mandate to provide services and materials that would make a difference in classrooms for the deaf.

Expanded authority of the Captioned Films Program allowed for rapid growth and implementation. Workshops at Ball State and across the country helped to identify immediate needs. Caption writers were trained and the first educational film titles selected.

In a short time, more than 50 depositories were established to loan films to teachers of the deaf, but it soon became evident that availability of a few film titles did not guarantee their use.

Shortage of projectors, lack of knowledge, and the fear of something new or different posed a menacing threat.

Then out of the Southwest along about 1964 came an experienced educator of the deaf, wearing a Stetson and eyes twinkling, telling all who would listen about something called "new media" for the deaf.

"The Marshall" (Hester) with his posse -- Frank Withrow, Bob Stepp, Bill Jackson, and other recruits -- assembled in Cave Spring and Little Rock to plead the case for "new media."

CFD Director John (Gough) presented "the Marshall" with a presidential warrant, the orders: "INFILTRATE from the rear, storm the classrooms, and project your films!"

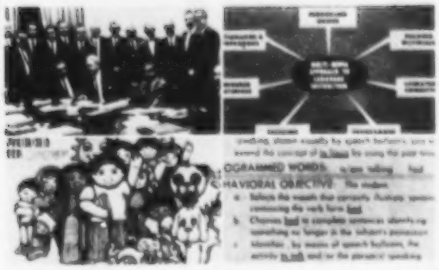
Skirmishes were frequent and widely scattered. Battlelines were drawn. The die was cast. A major assault was planned for Lincoln in 1965.

By 1966 a campaign was underway to establish four base camps under the command of four trusted lieutenants.

Their orders were to see that teacher training workshops were conducted in the uses of new techniques and equipment.

Teachers of the deaf were armed to fill the front lines and drilled against inertia and conventional methods of teaching exceptional children.

Director John conducted an inspection of each site: Amherst, Massachusetts; Knoxville, Tennessee; Lincoln, Nebraska; and Las Cruces, New Mexico.



Back in Washington, at CFD Headquarters, a special project was given "LIFE." A new offensive was being planned to facilitate language development.

A strategic command post was set up at the NEA building to produce a new type of first-aid kit: language instruction programmed for deaf learners. Objectives were clearly stated in behavioral terms. Performance criteria were specified with responses controlled by a Program Master.

Extensive fieldtesting was carried out under actual combat conditions so that errors could be measured and frames revised for maximum effectiveness. Bulk delivery of "LIFE" kits to front-line forces is underway at this time.

The Knoxville garrison, with some engineering help, built a secret weapons laboratory and established a network of outposts to keep supply lines open.

After months of hard work and engineering studies, a prototype machine was unveiled that could spell out words from coded messages on a paper ribbon faster than a man could talk.

This discovery plus the invention of a fantastic picture-recording device led to a real breakthrough in communication. Messages with pictures now could be recorded on a narrow spool of tape and sent anywhere for viewing.

Immediately, these unique tape machines were put to use in the front lines. In fact, they became so popular that the Southern Center had to start another large-scale operation just for processing special messages requested by field commanders.

Rumor has it that secret agents are operating in the field with a smaller, portable version of this new tape-recording machine.

Scouting forces report that legions of liberated deaf learners are able to produce special messages for showing to their friends and schoolmates outside the classroom. More action in this sector is anticipated.

At the same time, revolutionaries had been active in the New England area. The Fort at Amherst was under seige briefly until Wyman's forces unleashed a recoilless projector on the unsuspecting populace.

These big guns fired 10x10 projectuals over the head to make large images high above the front lines. Word spread rapidly, and before long every teacher of the deaf had her own overhead.

But the supply of large caliber projectuals was a bit limited until everyone learned to make his own. Later, one of Wyman's scouts armed some deaf students with personal visual response projectors.

Rapid firepower and greater accuracy knocked down learning barriers faster than ever. As this tool became more common, demand for a variety of projectuals increased.

Regrouping their forces, the Northeast Center started turning out transparency masters by the thousands and began an intensive preparation program for media specialists. These graduates will man the ramparts and lead the way with "multimedia."

And then, down from the Great Plains and into the heartland of this nation came the legend of Stepp's Rangers, marching to the sound of a new cartridge-loading projector.

The caliber was only 8mm, but this compact loop-action repeater was easy to operate and real handy in close hand-to-hand combat. Above the roar of their repeaters could be heard the sprocket holes and takeup reels of the automatic self-loading 16's.

But Stepp's Rangers were unyielding in their efforts to capture the minds of young learners, wherever they might be. They soon acquired a munitions factory in ole Lincoln town to turn out a steady supply of rim fire cartridges for their increasing army.

Initially they concentrated on speechreading and cued speech to gain a threshold. Later efforts included 10x10 projectuals and production of films in the new super-8 format.

A tactical symposium is held at Fort Lincoln each year, and since 1965 officials from all parts of the nation have assembled in Lincoln each spring to discuss campaign strategies and plan new maneuvers for the coming offensive.

Meanwhile, back in the great Southwest -- the solitude of the wide open spaces was interrupted by the rumble of a commando detail known as "Project Hurdle."

Special advisors to isolated outposts, this group of specialists conducted training exercises and armed the troops with the latest materials and equipment.

Staff headquarters at Las Cruces was the staging area for this operation, providing detailed maps and programmed instructions for every type of campaign.

The expert staff was efficient and methodical. With cold logic, they plotted each step and outlined each move, proceeding with deliberate pause to the next objective and confirmation of every decision.

A sinister plot to stop "the Marshal" was uncovered, and an organization man by the name of Summers was sent to look into matters.

Alas, it was true. Retirement finally got to "the Marshall," and his badge was enshrined with his Stetson for all to remember.

Meanwhile, other outposts and supply lines emerged as powerful allies in the struggle. Trails were blazed into Wisconsin and to the coastline of California.

These special enclaves were bulwarks of defense, stocked with provisions for a prolonged seige on blindness, mental retardation, and other handicaps.

Braille books, compressed speech, audiotapes, games, puzzles, special apparatus and devices were stockpiled for quick issue. Rapid communication was vital to their operation and to the success of the overall campaign to wipe out ignorance, fear, and despair.

As more new media flowed into the front lines, urgent appeals for new materials to fight special battles were being received from all sectors.

By 1968, communications links and supply lines stretched from the Great Lakes to the Gulf, across the Rockies to the Far West, and back to the Eastern seaboard.

This network of Special Education IMC's and RMC's was the vanguard of a new era, the launching of a bold new concept.

A Bureau of Education for the Handicapped was formed and the charting of new directions beyond the horizon and into the frontiers of outer darkness begun.

Educational technology was to be the catalyst that would lead special education from the age of the Conestoga to that of the Saturn V Rocket in less than a decade.

While past giant steps for man are now considered routine, the effort continues to bring educators and handicapped students into the heart of the conflict -- to meet, do battle, win, and grow.

The dedicated leadership of Dr. Edward Martin, Associate Commissioner, Bureau of Education for the Handicapped, has been recognized. Under his direction the Bureau is making an all-out effort to meet the educational needs of all handicapped children in the next decade.

Research, training, early education, aid to the states, deaf-blind centers, vocational programs, and media services reflect a major commitment.

It has long been realized that individuals differ and many people have been concerned with the results of a different kind of education for the exceptional child.

Frank Withrow, for example, Division Director over Media Services and Captioned Films, is an outspoken critic of traditional solutions. His strong conviction that technology can be the difference expanded the scope of Captioned Films to include media services for all the handicapped.

The able assistance of Gil Delgado, Mac Norwood, and many others has likewise made a difference. Never before has the teacher of the deaf, the blind, the crippled, or the retarded child had resources at his beck and call as in the 70's.

Teachers of exceptional children are learning to write behavioral objectives, to make films and videotapes, to individualize instruction, to schedule children on computers -- effectively managing learning resources and media to make a difference.

Dr. Sidney Marland, Jr., United States Commissioner of Education, recently said, "It is unjust for our society to provide handicapped children with anything less than the full and equal educational opportunity they need to reach their maximum potential and attain rewarding, satisfying lives."

Dr. Marland has cited Education of the Handicapped as one of five areas on which the nation will focus during his tenure as Commissioner. But only part of the challenge has been met.

To progress and win, the battle must be fought daily by the classroom teacher. There can be no victory without a fight. The destiny of deaf people lies with you. Indifference, apathy, and fear of the unknown must be overcome.

What is done for the handicapped is important, and what you do with the children entrusted to your care will determine the degree of difference.

A rewarding future can be envisioned, a future awaiting only a greater and more dedicated commitment.

Yes, the home, school and hospital; doctor and lawyer; parents, teachers, and the community -- all together can make a difference.

Our technology is only a means to an end. But when the mixture is right, media can be the fuel for our spaceship, the difference between success and failure, a new world for those who are "different."

A DOCTORAL PROGRAM AT SYRACUSE UNIVERSITY IN INSTRUCTIONAL TECHNOLOGY FOR EDUCATION OF THE DEAF

James C. Achtzehn, Jr., M. Ed., Doctoral Fellow,
Syracuse University

(Note.—The following is the text from a slide/tape presentation)

At Syracuse University the area of instructional technology has prepared individuals from the fields of social work, nursing, business, religion, journalism, and teacher education as educational technologists. In the fall of 1970, a prototype program was implemented to prepare experienced educators of the deaf as instructional technologists. The objectives of the program are:

1. To familiarize the participants with the tools of media and technology.
2. To develop basic competence in the design and analysis of instructional systems compatible with different patterns of special education curricula and administration.
3. To develop principles of utilization of media in the solution of specific learning problems of deaf children.
4. To improve the participants' ability to administer educational technology programs for special education.
5. To sensitize individuals to the importance of human relationships in the processes of teaching, learning, and serving.
6. To contribute new research to the fields of educational technology and the education of the deaf.

The program includes formal courses, personal counseling, use of independent study resources in educational technology and special education, field visitations, and practicum experiences. The program is custom-designed for each participant, with emphasis not only on graduate study in educational technology but also opportunities for advanced study in education of the deaf and relevant areas of special education. All courses in the regular academic program are open to the participants. Each fellow enrolls in a common seminar in which the concerns of educational technology in education of the deaf are brought together. Special features of this seminar are field trips to the National Technical Institute for the Deaf in Rochester, New York; the Syracuse Public Schools Computer Based Project; schools for the deaf within commuting distance; and appropriate professional conferences in instructional technology, education of the deaf, and special education. In the context of the seminar, special visiting lecturers are invited to probe current issues with the faculty and participants. Such guest lecturers have included: Dr. Louis DiCarlo, Director of the Audiology Clinic, V.A. Hospital, Syracuse; Dr. Paul Twelker, gaming and simulation expert; Dr. Donald Moores, professor at the University of Minnesota; and Robert Lewis Shayon, editor of the radio and television section of Saturday Review and full professor at the University of Pennsylvania, Anneburg School of Communication. In addition, the professional staff of the Department of Special Education at Syracuse has held mini-seminars with the group.

During the summer after the first academic year, each participant serves on the staff of either Project LIFE in Washington, D.C., or one of the Regional Media Centers for the Deaf (RMC's) at the University of Massachusetts, the University of Tennessee, the University of Nebraska, or New Mexico State University.

As a prototype program, it is continually being evalated and revised. This is done partially through meetings with the advisory committee.

The key educational technology personnel in this program during its development phase are Dr. Donald P. Ely, professor of education and chairman, Department of Instructional Technology; and Dr. John H. Tyo, associate professor, Instructional Technology. Plans continue to add a key person in education of the deaf to the faculty of special education and the faculty of instructional technology. The facilities and resources at Syracuse are many and varied.

All participants are trained teachers of the deaf and come with varied backgrounds. The fellowship group for 1970–71 included:

James C. Achtzehn, director, Instructional Media Center, Western Pennsylvania School for the Deaf, Pittsburgh.

Barbara A. Bodner, teacher, Ohio School for the Deaf, Columbus.

John W. Butler, teacher, Callier Hearing and Speech Center, Dallas, Texas.

Robert R. Davila, supervising teacher, elementary school, New York School for the Deaf, White Plains.

Gordon M. Hayes, consultant in education of the deaf and hard of hearing, California State Department of Education.

Having successfully completed its first academic year, the program has been funded for two additional years. The grant provides funds for the initial group to continue their work and for five new people to be added to the program. Applications are now being processed and will be accepted through July 6, 1971.

In Syracuse we have a saying, "If you don't like the weather, wait a minute!" Last winter was no exception. Needless to say the environment at Syracuse is invigorating.

MEDIA SPECIALIST PROGRAM AT THE UNIVERSITY OF MASSACHUSETTS

Anita Nourse, M.S. Ed., Coordinator of Media Specialist Program for Educators of the Deaf, University of Massachusetts

Consider these facts:

1. One-third of the adult deaf population is functionally illiterate!
2. The average graduate of a school for the deaf is reading at only 5th-grade level!
3. The deaf population has changed from postlingually deaf to prelingually deaf!
4. More and more deaf children have multiple handicaps!

Educators of the deaf have good reason to be alarmed. Our present methods of teaching are failing deaf children. Responding to this failure, the government has increased its commitment to media utilization for the hearing impaired. Media Services and Captioned Films has had an important role in providing media and mediaware for the deaf. Virtually every classroom for the deaf has been supplied with an overhead projector. Numerous special projects have been established, including 4 Regional Media Centers (RMC's) and Project LIFE.

The Media Specialist Program for Educators of the Deaf was begun two years ago at the University of Massachusetts. It is the only undergraduate-graduate program in the United States to prepare media specialists to work in schools for the deaf. Students starting at the junior year are given extensive training in both media and deafness. After completing the 3-year program, they receive master's degrees. The goal is to attain optimum media utilization in schools for the deaf. The preparation program is funded through the Bureau of Education for the Handicapped, United States Office of Education.

At the present time there are no deaf students in the program. Since we are committed to the belief that the deaf should be in responsible positions in the field, we hope to get at least two deaf students for the coming spring semester. Interpreters will be provided if necessary. One of our staff members is deaf, and he is the first deaf teacher to teach at any level in Massachusetts.

COURSE OF STUDY

The course of study has been organized into four main categories: media, deafness, education, and psychology. Staff members of the Media Specialist Program teach many of the courses.

There are 9 courses taken in the area of media. Topics covered include use of equipment, production of materials, media for the deaf, television, film, administration, cataloging, and an internship.

In a media production course, Mr. Nathan Tilley helps the students prepare media directly related to the education of the hearing handicapped. This semester one of the students produced a multimedia package on greenhouses. Her first few slides were used to demonstrate that a greenhouse is not a house painted green, or one owned by a family named Green, but a building in which flowers are grown.

As part of the course relating media to the education of the deaf, the students evaluate existing media. The following two slides were taken from a set explaining idioms to the deaf. The first illustrates an excellent visual presentation of the idiom, "Her bark is worse then her bite." The woman is complaining because the children are picking flowers, but at the same time she is offering them cookies. The second slide, "to count on," shows Mr. Leopold with Mr. Jones' check. Rather than thinking that "count on" means "depend," the children may feel it means "steal."

This year the Northeast Regional Media Center for the Deaf is preparing a series of vocational education transparencies. The coordinator, Mr. Stanley Patrie, and the graphic artist, Mr. John McLaughlin, discussed the series with the students. The reasons for making the set, the construction and use of the guidebook, and the methods of visualizing the materials were all explained. The students, in turn, evaluated the individual transparencies and gave helpful suggestions which were incorporated into the set.

Although the students are not prepared to be teachers of the deaf, they receive a good background in the field. Two seminars are given by experts in particular aspects of deafness. Some of the 30 topics covered include cued speech, speech, psychology, total communication, oralism, social work, and visual literacy. Before the presentation, the speaker meets with the students and staff for a coffee hour. This gives the students a chance to talk more informally with the speaker.

As part of the overview course in deafness, students receive instruction in manual communication. In addition, language, reading, speech, speechreading, communication methods, and psychology are covered. Two courses are taken in teaching language to deaf children. The basic objectives of language courses for media specialists are: (1) to be aware of the various approaches to teaching language; (2) to effectively prepare media to help improve language; (3) to know the average level of language development at different ages and (4) to caption media with language suitable for the target audience.

Dr. Harris Nober, in the Audiology Department, has designed a course specifically for our students. This course will cover the physical, psychological, social, and educational problems and needs of the hearing handicapped.

In general education the students learn about methods of teaching, computers, curriculum, and statistics. Several schools for the deaf are presently using computers for instructional purposes. The media specialist should be able to help in establishing computer-assisted instruction in a school. By involving the media specialist during the planning stages of curriculum development, he will be able to provide more effective media. To judge the effectiveness of his media, he must be able to use statistics and behavioral objectives.

The student has his choice of two psychology courses. These may be in the area of development, behavior, personality, programmed instruction, learning and thinking, or exceptional children. Dr. Solis Kates, psychologist for the Clarke School for the Deaf, teaches the course in the Psychology of Exceptional Children.

INTERNSHIP

The entire second semester of the graduate year is spent at a school for the deaf. The principal goal of the internship is to give the students actual practice in all the functions of a media specialist under the supervision of a competent media director. Since the program is only two years old, the first internship will start next Spring.

The activities during the internship have been divided into five categories. These include activities with the media director, with teachers, with paraprofessionals, with students, and with personnel in a small nearby school.

The intern will devote most of his time producing all types of media; including transparencies, 2 x 2 slides, 8-mm movies, audio recordings, and video recordings. He will also catalog materials, maintain equipment, conduct in-service workshops, prepare budgets, and conduct a research project.

Each intern will student teach in one classroom for a period of three weeks. Before this three-week period, he will have observed that class for twenty-five hours. The primary objective of student teaching is not to prepare the intern to be a teacher but to give him a better understanding of the role and needs of teachers.

Paraprofessionals have an increasingly important role in classrooms. With appropriate instruction, they can assume many of the duties of a teacher. The intern will instruct paraprofessionals in the operation of equipment and in local production techniques.

Through the utilization of media, a teacher is able to communicate more, and more clearly with the students. Equally important is the student communicating with the teacher and with other students. The intern will help students communicate more effectively through media.

One-half day each week will be spent at a nearby day class or small day school. In general, activities will include helping teachers integrate media into their lessons and training them in local production techniques. It is hoped that each graduate of the Media Specialists Program willl continue working with a small program in addition to his work at a larger school.

PRACTICUM

The University of Massachusetts is an excellent site for the program for several reasons: one of the four Regional Media Centers for the Deaf is located there; the director, Dr. Raymond Wyman, is a leader in the field of media; and there are many schools and classes for the hearing impaired nearby. Because of this, the students have a unique opportunity to learn about the latest developments in media for the deaf.

Students observe classes in many schools for the deaf. Eight different schools were visited this year. For Juniors, the emphasis of these visits is placed on developing a general understanding of various methods and techniques. The Seniors concentrate on media utilization in the classrooms.

Each Senior prepares a multi-media lesson based on a curriculum goal selected by a teacher. They then teach the class using their materials.

The Seniors also are involved in independent study. Some of them acted as teacher's aides at the Austine School for the Deaf one day each week. One student helped in the preparation of a multi-media kit on the utilization of overhead projectors in classrooms for the deaf.

Many of the students have attended a performance of the National Theatre for the Deaf.

The Massachusetts Council of Organizations Serving the Deaf (COSD) meets monthly. Students attend their meetings. Here they have the opportunity to meet the full spectrum of hearing impaired adults. One of our students services as an interpreter at these meetings.

Each year the students attend a national convention. The Juniors attend the Association for Educational Communications and Technology (AECT) and the Seniors and graduate students attend the Lincoln Symposium on Media for the Deaf. This year the students were able to participate in the RMC meetings held just before the Lincoln Symposium. One student participated in the topical conference on media sponsored by the Council for Exceptional Children in San Antonio.

One of the students became very interested in Cued Speech after hearing Dr. Cornett at a seminar. She went down to Washington, D.C. for three days to learn about the complete method. She hopes to teach cued speech to a family with a hearing-handicapped child next year.

The students take a course in language offered at the Clarke School for the Deaf. This gives them weekly contact with teachers of the deaf, teachers in training, and a total school program.

STIPENDS

Stipends are available for qualified students. Juniors receive $300; Seniors receive $800; and graduate students receive $2,000, with $600 for each dependent.

CONCLUSION

Schools for deaf children have a special need for media. Because the children cannot use their hearing effectively, visual presentations are vitally important. Media specialists in these schools need to have a strong background in both media and deafness. The Media Specialists Program for the Deaf provides students with competencies in both areas and hopes to improve the education of deaf children through more effective use of media.

THE SPECIAL EDUCATION IMC/RMC NETWORK: AN OVERVIEW AND EMPHASIS ON RESOURCES AVAILABLE TO EDUCATORS OF THE HEARING IMPAIRED

Philip F. Newberg, Ph. D., Assistant Executive Director and Coordinator, Special Education IMC/RMC Network, Arlington, Va.

A speech teacher was once heard to advise a student: "When you're giving a talk, first tell your audience what you're going to tell 'em; then, tell 'em; then, tell 'em what you told them!" I am going to adhere somewhat to this teacher's suggestion, because I have a twofold purpose in speaking to you this afternoon, and I want to insure that you will be attentive when I get to the crux of my presentation. First, I want to give you an overview of the development of the Network; I have been informed many of you are relatively unfamiliar with its brief history. More important, however, is my desire to relate to you the wealth of resources that the Network has to offer educators of the hearing handicapped. Now that I have prefaced my presentation, I will begin with an *Overview.*

WHAT WAS THE IMPETUS FOR THE SEIMC CONCEPT?

In 1962, President John F. Kennedy's Panel on Mental Retardation established task force teams which studied programs for the mentally retarded in Europe. The report of this Panel reflected the importance some Europeans place upon the training of teachers in the development and use of educational materials. No exact specifications for these centers were offered, but the document did recommend that a network of instructional materials centers (IMCs) be established in the U.S. to make information about instructional materials available to all teachers and supervisors of programs for the mentally retarded.

WHAT WAS THE INITIAL OF THE SEIMCs?

Initially, the purpose of the Special Education Instructional Materials Centers (SEIMCs) and the Regional Media Centers for the Deaf (RMCs) was to effect improved and innovative practices in the education of handicapped children. To implement this goal, strategies were devised to provide special educators and related personnel with ready access to valid materials, methods, and media and information about them in order to assure their appropriate use in the classroom. This purpose has not changed, although the mode through which this goal is being accomplished has changed during the intervening years.

WHEN AND WHERE DID THE SEIMC PROJECT ORIGINATE?

Two experimental mental retardation IMCs were established in 1964 to field test the SEIMC concept. These centers were established at the University of Wisconsin and at the University of Southern California, respectively. (See Figure 1.)

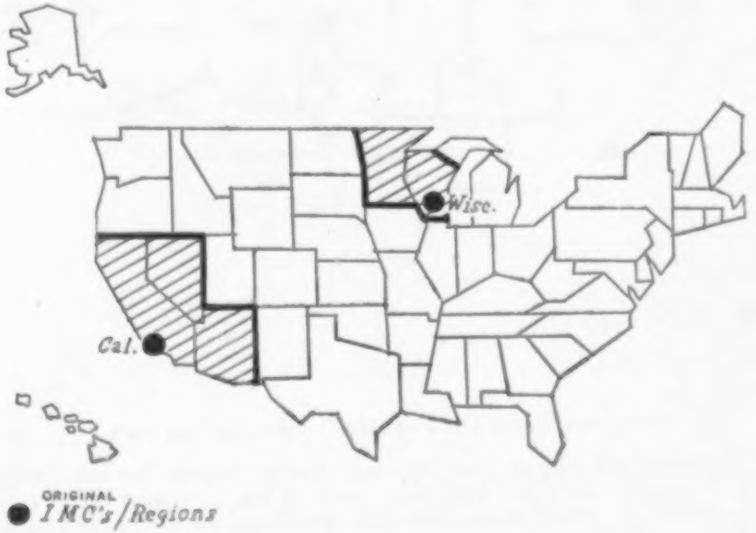


Figure 1

WHAT ARE THE FUNCTIONS OF SEIMCs?

The 3 minute slide-tape presentation I am about to show you provides a concise pictorialization of pertinent background information about the centers within the Network.

[Present Network 3 minute slide-tape show.]

WHEN WAS THE NETWORK FORMALLY ESTABLISHED?

Early in 1966, after the two prototype centers had demonstrated that they had fulfilled their primary purpose sufficiently well to justify the expansion of the Network, the network of Special Education Instructional Materials Centers was founded officially with the addition of eight new SEIMCs and the CEC-ERIC Information Center for Exceptional Children. Four more centers joined the Network in 1967, bringing the total number of Network components to 15. (See Figure 2.)

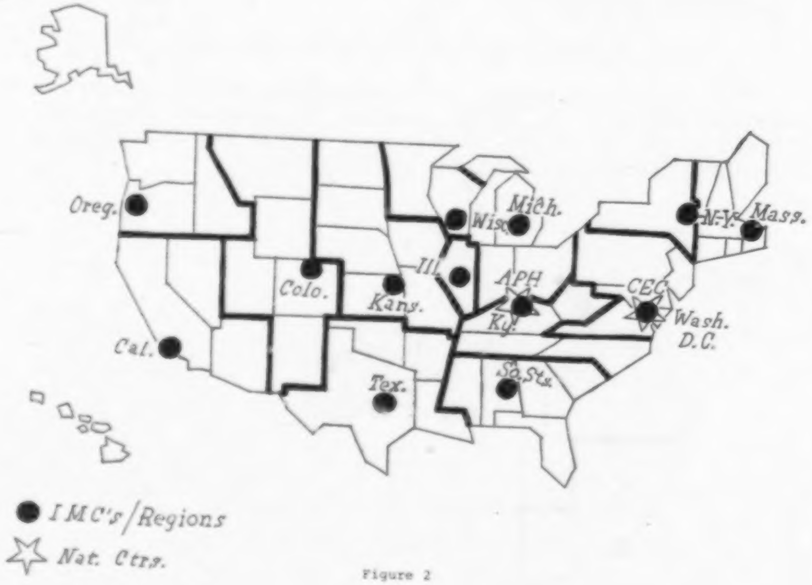


Figure 2

WHY AND WHEN DID THE RMCs JOIN THE NETWORK?

Development of the four Regional Media Centers for the Deaf, established in 1964 and 1966 as a result of the captioned film legislation in 1962, closely parallelled the establishment of the SEIMCs. (See Figure 3.) This program was also sponsored by the Bureau of

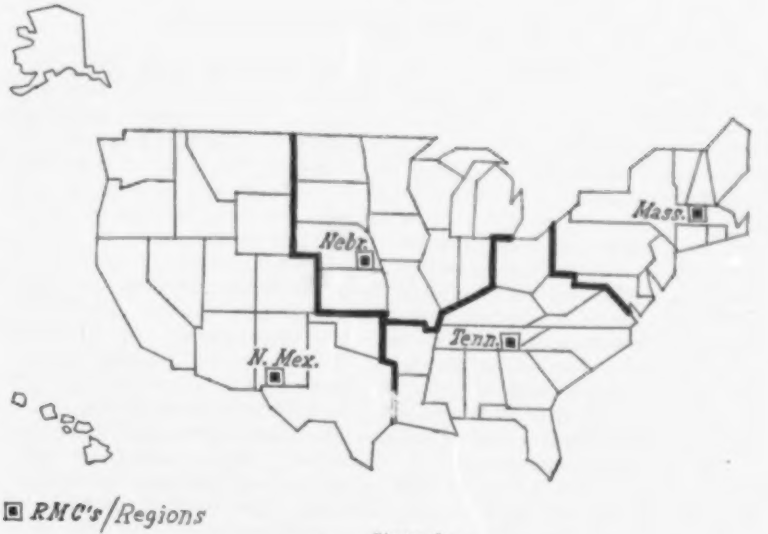


Figure 3

Education for the Handicapped (BEH)/U.S. Office of Education (USOE), but it was developed independently of the SEIMC project. Because of the complementary nature of the SEIMC and RMC programs, both operations were incorporated into a single network in 1969. (See Figure 4.)

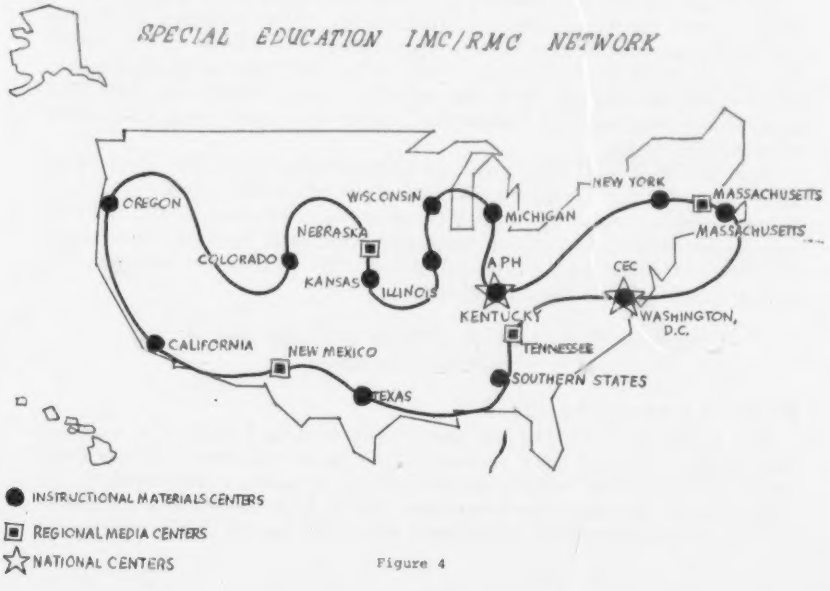


Figure 4

WHAT IS THE NETWORK'S PRESENT FOCUS?

Each regional SEIMC is presently transferring much of its former function of providing direct services to teachers to state- and locally-funded associate special education instructional materials center (ASEIMCs), who are much closer in geographic proximity to the users of media and materials; however, they continue to provide direct teacher services in areas where associate centers are not accessible. The regional SEIMCs are now devoting increasing attention to cooperative relationships with state departments of education; their intent is to facilitate the development of intra-state associate center networks within their particular regions. In addition, the regional centers provide assistance to the ASEIMCs through consultation services and the development of inservice training and information packages. Other ongoing SEIMC activities include identifying, developing, producing, and evaluating new materials for handicapped children, as well as disseminating information on the effectiveness of various educational ideas and products.

The 50 state departments of education (special education divisions) have played a crucial role in expanding the national acceptance and impact of the Network. Through their commitment to and modification of the instructional materials concept, over 300 local ASEIMCs have been established to date. These ASEIMCs now provide the majority of the Network's face-to-face contact with special education teachers: they loan instructional materials, give media demonstrations, conduct workshops, and provide consultation regarding instructional materials, classroom management, and individual pupil learning strategies.

All four RMCs are primarily concerned with developing teacher skills in the use of educational technology. They conduct institutes and inservice workshops on the applications of media to the learning problems of deaf children. Each center has also assumed responsibility for developing new uses of educational television, overhead projectors, programmed instruction, 8mm film cartridges, and other educational media.

The SEIMC/RMC Network, in collaboration with the Bureau of Education for the Handicapped and state education agencies, is constantly seeking ways to facilitate communication within the field of special education. Improved communication will lead to more rapid diffusion of ideas and practices which will ultimately enhance the education of handicapped children.

NETWORK RESOURCES AVAILABLE TO EDUCATORS OF THE HEARING-IMPAIRED

Products produced by SEIMCs

Since the four RMCs are specifically charged with the task of providing media to deaf educators and most educators of the deaf are well acquainted with these activities, it seems inappropriate, at this time, to reiterate these services. Instead, let us consider a number of the products that have been produced by SEIMCs which are applicable for use by and available to educators of children with hearing handicaps. (A partial list of products and the SEIMCs that have developed them follows.)

Even though the American Printing House for the Blind is noted for its production of Braille and large-print books, it also produces a wealth of teaching materials that are applicable for use by hearing-impaired children. Some examples of these educational aids include preschool and primary level manipulative materials, such as: materials designed to help children to match textures and colors; a board to develop form discrimination using puzzle shapes of the right and left hands; a shapeboard which helps a child distinguish shapes and colors; and a "Geometric Area and Volume Aid," a 3-dimensional learning tool that teaches geometric concepts of area and volume.

A number of transparencies have been developed by the Colorado SEIMC to teach school safety to educable mentally handicapped and multiply handicapped children, as well as transparencies which describe single and compound words largely associated with deaf children's everyday vocabulary. In addition, this SEIMC has produced a kit for use with deaf children that explains the concept "jump." This concept is taught through the use of film loops, flip books, and multiconcept verb wheels. A 35mm slide series entitled "Single Concept Vocabulary for the Deaf" has also been developed by the Colorado SEIMC that teaches young deaf children about different foods and their sources and uses.

The Michigan State University SEIMC has produced a slide series with script depicting various teaching techniques that are useful in instructing blind-deaf children. This center has developed the most abundant supply of materials for use with the blind-deaf of any of the centers within the Network.

Captioned films and filmstrips that are available for evaluation with deaf children can be obtained from the New York State Department of Education SEIMC at Albany.

Instruction for parents in teaching spoon feeding to preschool multiply-handicapped children is available upon request from the Oregon SEIMC.

The Texas SEIMC has compiled a list of professional monographs and journal articles pertaining to the education of deaf-blind students.

A product called "Sighty Mouse" has been developed by the Wisconsin SEIMC to encourage deaf children to visually observe details. This set of slides was adapted from a comical book about a mouse.

It should be noted that almost all early childhood-oriented instructional aids that are not on audiotapes but on filmstrips and films are relevant for use by educators of deaf children.

Packaged inservice training programs developed by SEIMCs

Many training packages have been and are being developed by SEIMCs which can be used with few or no modifications to improve the teaching skills of those who work with hearing-impaired students. These packages are equally applicable for use with teachers working with students who are deaf in addition to having other impairments. The relevancy and wide applicability of these packages is put into perspective when one considers USOE statistics indicating that about one-third of *all* hearing impaired children receiving special education are multiply handicapped.[1] These data support the notion that many SEIMC-developed products and training packages could be appropriately used by educators who work with students having hearing impairments and other handicaps.

Examples of several SEIMC developed training packages are as follows:

The Colorado SEIMC has produced videotapes related to basic procedures in puretone audiometry screening and diagnoses.

George Washington University's SEIMC has developed several videotapes demonstrating the use of Montessori materials.

Many teacher-training documents prepared by the Michigan State University SEIMC are designed expressly for use with deaf-blind students.

Computer Based Resource Units (CBRU) have been developed by the New York State SEIMC to assist the teacher in matching learning deficits with prescriptive methods and materials. One CBRU particularly appropriate for use by teachers of deaf students is entitled "Management of Social Behavior." This unit, like the others outlines behavioral objectives and supplies appropriate activities and materials to meet the stated objectives. The center also has a package of 17 films, slides, and teacher guides of international films for educators of the deaf.

The Engineered Learning Project (ELP) multimedia package developed by the Oregon SEIMC provides administrators and other educators with information regarding classroom management. Techniques are delineated that aid the teacher in using positive approaches to channel the student's academic and social behavior.

Perceptual materials developed by the University of Southern California SEIMC have been used successfully to aid students with deficits in this area. In addition, this center has produced a unique training package, as a result of a special study institute conference it held in 1969. The institute emphasized a training model using task-oriented small group interaction alternated with short, large group presentations. The package includes several items, such as the institute schedule, hourly small group task sheets, and outlines for media production workshops. This package offers a wealth of useful teacher-training techniques for educators of the deaf.

If you desire to obtain any of the aforementioned products and/or training packages, please contact your regional SEIMC by phone or mail to make the request to the producing center. For your convenience, a complete listing of directors' names and regional SEIMC addresses is available upon request to the Network office.

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[1] Based upon data obtained during the 1969–1970 school year and reported in the *Annual Survey of Hearing Impaired Children and Youth*, a project funded by the Division of Research, Bureau of Education for the Handicapped, U.S. Office of Education.

Various information resources

The CEC-ERIC Information Center, the agencies allied with the Network, and a number of SEIMCs provide a valuable information resource for educators of the deaf.

A central information system on exceptional children has been developed by the CEC Information Center. This center maintains a comprehensive collection of professional literature and processes these documents for inclusion in *Exceptional Child Education Abstracts* (ECEA), *Research in Education* (RIE), and *Current Index to Journals in Education* (CIJE). The Information Center is also involved in the development of other products such as a journal, *Teaching Exceptional Children*, and state-of-the-art papers. Staff members are continually improving and expanding their data base in professional literature (which includes several bibliographies of programs, research articles, and film lists in the field of the hearing impaired), their responses to information requests from individual users, and their library services.

Other projects allied to the Network that offer resources to deaf educators include: Project LIFE, sponsored by Media Services and Captioned Films, Division of Educational Services, BEH/USOE; Project CARE (Computer Assisted Remedial Education), Department of Special Education, Pennsylvania State University; and the ten Regional Deaf-Blind Centers, funded by the Division of Educational Services, BEH/USOE.

Since a major focus of SEIMCs has been to serve as a facilitator of communications between and among the various resource units in the field, they can quickly put individuals in contact with various educational consultants who can be of assistance. They can also recommend model programs in their regions which may be visited to observe and obtain new ideas and innovative practices that can be replicated elsewhere.

Future network developments

Several major emphases are emerging as the Network's centers continue to develop into a more viable system. These developments (listed below) will benefit educators of the hearing impaired.

1. Much effort is being generated by SEIMCs and RMCs to develop more packaged training programs that will be directed toward teacher trainers serviced by these projects. In most instances, these packages will not require extensive training of inservice trainers.

2. Greater time will be spent in the development of extensive SEIMC and RMC sub-networks. Specific concern will be directed toward developing definite or systematic procedures that will result in bringing about vital functions which will facilitate the learning of handicapped children by enhancing teaching styles, tools, environment, and so on. (Those individuals who are staff members working in learning resource centers and instructional materials centers housed in residential and other schools for the deaf are encouraged

to explore ways to interface with the over 300 ASEIMCs and the 13 Regional SEIMCs throughout the U.S. Please write the Network office if you desire a listing of the locations of these centers throughout the country.)

3. There are plans for an increased number of interlocks between and among SEIMC/RMCs, i.e., collaboration on projects that will be beneficial to all handicapped children, including the deaf and multiply handicapped.

4. RMCs and SEIMCs will cosponsor more workshops to integrate proven instructional methods and materials with appropriate media format.

5. Ideally, the present Network will become a system of components (SEIMCs/RMCs, as well as other BEH-funded projects such as deaf-blind centers, early childhood centers, etc.) that will interrelate and intertwine in the manner of the threads in a net; these units will comprise a group so combined as to form a whole and to operate in unison—the realization of which will be a special education communication system.

PROJECT ME (MEDIA FOR THE EXCEPTIONAL): MEDIA DEVELOPMENTS FOR THE EDUCATION OF YOUNG HANDICAPPED CHILDREN

Sol M. Roshal, Ph. D., Drector, Media for the Exceptional Project, Dubnoff School for Educational Therapy, North Hollywood, Cal.

"Media for the Exceptional" was established at the Dubnoff School under auspices of Media Services and Captioned Films, Bureau of Education for the Handicapped, to design and develop learning materials, practices, and techniques for the early education of handicapped children. To this purpose, we have set ourselves two objectives:

1. To develop materials for meeting significant educational needs of the young, preschool, handicapped child;

2. To develop new media capabilities for education of the handicapped.

So we have been developing educational programs and techniques which would help us design more effective materials. I should like, today, to show you excerpts from our programs and describe for you a projection system which we call the "Learning Wall" that you may consider their application to the education of hearing-impaired and deaf children.

I say "that you may consider" for I can tell you very little about the applicability of our work—particularly, the educational materials—to the education of your children. The target population for whom we have been designing includes varieties of emotionally disturbed, retarded, and neurologically impaired children. We at Media for the Exceptional do not know, and have not been designing for, the hearing-impaired or deaf child. We are field testing our programs with children other than the target population. We have not yet worked with the hearing impaired, but we will in the coming academic year.

We now have three sets of materials we call the "Body Image," the "Let's Look For . . ." and the "Directionality" programs.

The "Body Image Program" consists of a teachers' guide, 10 sound filmstrips, and four picture puzzles. Design is based on the proposition that the child must have a good self-concept to relate, to cope, to learn effectively. Many of the handicapped youngsters do not have a concept of self at all. Differentiation of himself from the environment may be vague or there may be no notion of self as integral. The rationale for this program is that experiencing and knowing his body will help the child identify himself as an entity.

[Sound filmstrip: "I'm a Boy"]

The "Let's Look For Program" consists of a teachers' guide and 5 sound filmstrips designed to give the child the ability to examine, to scan, to look for, and to see what he is looking at. It is not an oversimplification to say that handicapped children must be taught to look and see.

[Sound filmstrip: "Let's Look For At Home"]

The four sound filmstrips in the "Directionality Program" are intended for teaching concepts of directionality and location such as up, down, across, over, and under. The program was designed to transition the child from dealing with such concepts in three-dimensional environments to the abstractions of, say, a printed page.

[Sound filmstrip: "You Naughty Puppy"]

We have also produced a film, "School Is For Children," to help speed the child's adjustment to nursery school. Separation anxiety is experienced quite ubiquitously by children entering school. It is not likely that the anxiety starts at the moment of crossing the school threshold or boarding the school bus. More likely, the child starts experiencing anxiety with respect to the school as soon as he realizes he will be going into a strange environment with strange people. The film was produced to be shown to the children before they come to school in order to provide more realistic expectations.

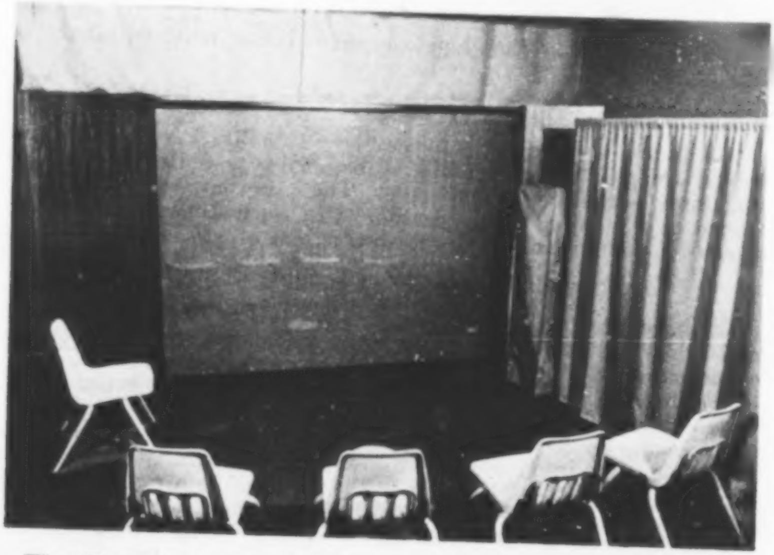
Parents, too, may not know what a nursery school is like. The unknown may generate anxiety in them, too, which the child may sense. If not anxious themselves, they may not have realistic expectations to use in dealing with the child's anxiety. Another version of the film with narration directed to the parents was produced for them.

Both the child and parent versions of the film are available with either English or Spanish narration from the United States Archives National Audiovisual Center.

Probably our most important contribution to new capabilities is the development of the "Learning Wall." For the "Learning Wall," there has been experience with hearing-impaired children. Dr. Harry Murphy adopted the concept for use in the Southwest School for the Hearing Impaired. Some of you, no doubt, have heard Dr. Murphy or one of his teachers describe their usage and their programs.

Mention of the motion picture was an advertisement. Advertising was not the primary motivation for showing the filmstrips. At least one intent was to use the programs to portray and exemplify material design characteristics which we consider important. At this point, I should like to explicitly call your attention to one principle which led to the development of the "Learning Wall."

Our designers, Irene Chambers and Florence Schaefer, wanted to be able to program for active learning by the children. They wanted the children to be able to interact, work directly with the materials. Flo's husband, Jack Schaefer, provided the basic conception which Mort Heilig realized and developed as the "Learning Wall."

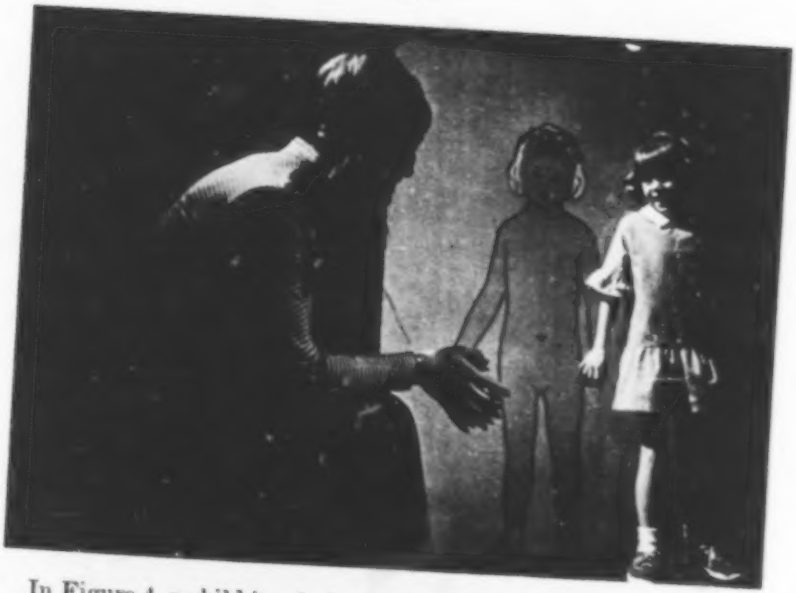


The "Learning Wall" (Figure 1) is a rear projection system with a very large screen placed at floor level. Thus, the children have direct access and may approach the screen without occluding the projected image. In addition to this basic capability, the system offers the materials designer many capabilities beyond conventional projection for developing programs which stimulate active student participation.

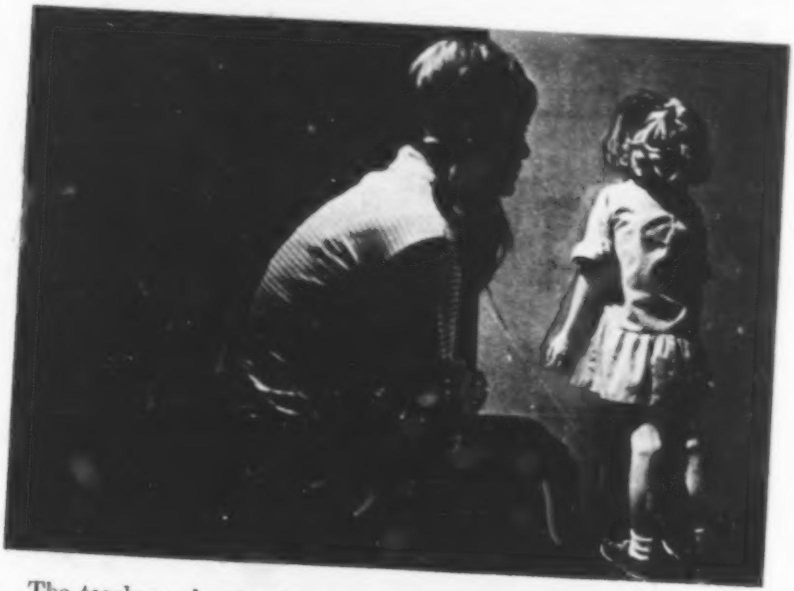
The "Wall" is framed on the left by a cabinet that conceals the projection equipment and a tape player. On the right by a curtained light board.

The "Wall" in Figure 2 is shown in use with the "Let's Look For Program." The child has been asked to pick out an object projected on the screen.

The same scene is projected again (Figure 3) this time with a circle drawn around the object showing the child he is correct.



In Figure 4, a child is asked to match her hand with a hand of the girl on the screen.

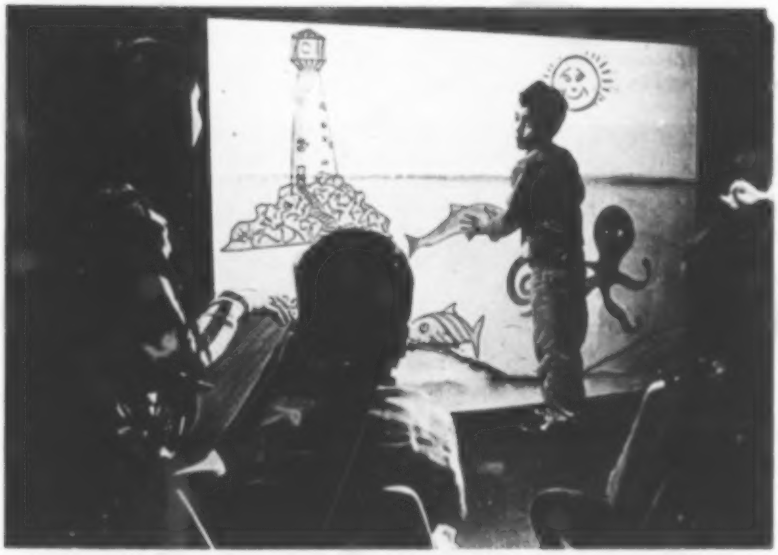


The teacher asks the child to match her entire body against the girl on the screen (Figure 5)

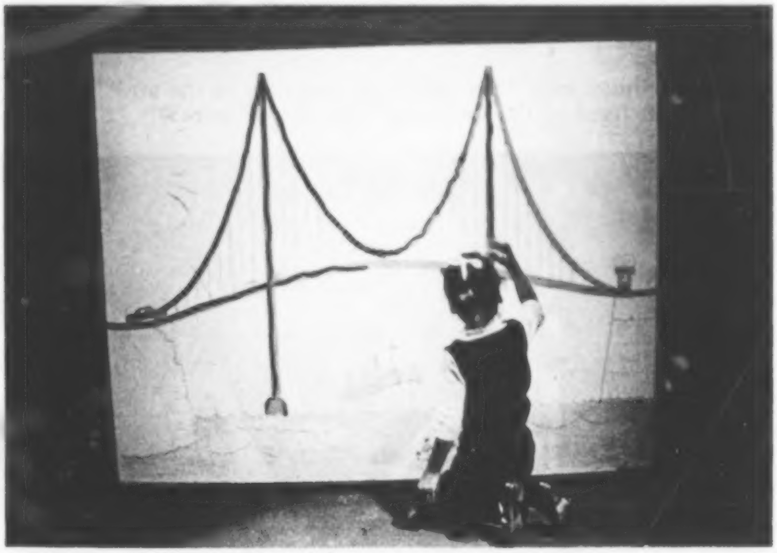
The above illustrates some uses of the rear projection property of the wall which we consider to be the most important. But the screen for accomodating projection has additional capabilities which are illustrated in the following slides.

With a change of lighting, the child can see himself reflected on the screen.

Simple Simon said, "Put both your arms up in the air." The boy standing in front of the Learning Wall did (Figure 6)

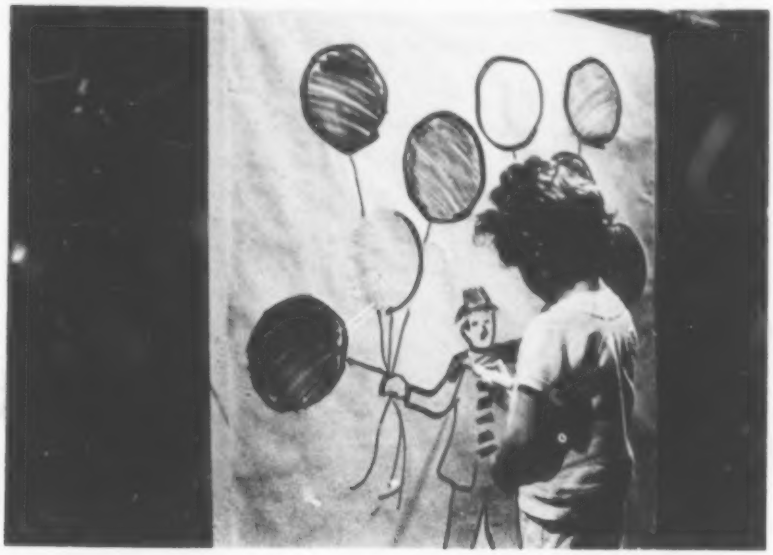


A slide is projected on the screen (Figure 7) showing two children. The student's image is still reflected (center) and he is able to interact with his "friends" on the screen.



The "stick-on" or felt board capability of the Wall is shown in Figure 8. Here a child places a stick-on plastic figure onto a scene that is projected onto the screen. The plastic adheres to the screen.

The little girl is drawing directly onto screen with a flo-pen.



The screen is wiped clean with a damp sponge.

Here (Figs. 11 and 12) the screen is used as a light table. A large sheet of tracing paper is placed over the screen allowing the child to trace the picture projected underneath the paper. The tracing allows the child to have something of her own to keep.

We have also designed a portable "poor man's" version which can be built with local talent and sweat. This version has the most important capabilities, but not all, of the larger "Learning Wall."

I hope that you are now excited about the "Walls" capabilities and stimulated to create new applications.

COMPUTER BASED PROJECT

Bernice M. Kipfer, Ed. D., Project Director, Syracuse (N.Y.), City Schools District

The goal of the Computer Based Project is, using a systems approach, to develop and test an evaluation system which will facilitate media materials evaluation for all areas of the handicapped. Ultimately, using the information from the Instructional Materials Evaluation System, the project will provide a model for evaluating instructional materials in a school setting using a Student Response System with a bank of evaluated materials.

The Project was funded in June, 1969 by the United States Office of Education, Bureau of Education for the Handicapped, Media Services and Captioned Films Branch. Within the Syracuse area there exists a vast amount of resources which would contribute to some innovative and significant evaluation of instructional materials with handicapped children; especially access to the Instructional Communications Center and the Department of Special Education at Syracuse University, the use of the computer at the Rome Air Development Center, access to General Electric time-sharing and other computer facilities and a solid working arrangement with General Electric Research and Development Center in Schenectady, and access to a wide variety of handicapped children in the Syracuse City School System. These seem to provide an excellent milieu within which to conduct evaluation studies. The goal is to develop an evaluation system essentially neutral to the specific material to be evaluated although initially the materials presently available from the Media Services and Captioned Films Depositories have become the present focus of attention and activity.

A significant portion of the first year of the project has been spent in the development of such an evaluation system. The activities consisted essentially of developing or modifying computer programs; designing, ordering and installing a response system; defining the specifics of the evaluation problem by the personnel; training other personnel to use the tentative evaluation system; collecting and considering recommendations from other project directors; and preparation of materials so that systematic evaluation was possible.

The result of the first year of organizing and developing a system has been that an evaluation system with considerable potential for processing a relatively large quantity of materials in a seemingly systematic way is operational. Pre-test–post-test items have been developed for a number of materials. These materials may now be evaluated to accumulate objective data simply by running them in routine ways through selected segments of the Syracuse population. With the specified population at the Computer Based Project Center, pre/post-test data is being collected through a totally automated system with minimum expenditure of professional staff time, while for other segments of the Syracuse population there exists means for accumulating data on forms which can be entered through the same computer system with a relatively low commitment of staff time.

The result from the application of the system is a large quantity of objective data relating to the effectiveness of specified materials in accomplishing specified goals with specified populations. Techniques have been developed for summarizing this data.

STUDENT RESPONSE SYSTEM

The concept of the General Electric SRS-1000C system is to permit a form of computer mediated instruction (CMI) in group format or in an individual study carrel facility, utilizing as much multimedia as required. The system provides a method of monitoring student performance via a data collection and analysis capability. The system thus provides data concerning student progress and the effectiveness of the instructional materials being used. The educator in the SRS-1000C concept thus uses the computer to monitor or mediate the instruction rather than perform the central function as in the case of CAI. In the CAI mode, one student occupies one computer terminal, one computer port, and requires one communication line. In the SRS-1000C (CMI) mode, the response of many students can be fed into the computer through one computer terminal port and one communication line. The primary difference between the two concepts is that CAI is considered a fine conversational mode and CMI is a selected response and timely mode.

The SRS-1000C system directly gathers response data from the students in either a group or individual mode, provides instantaneous feedback to the group or individual and uses a single "Teletype" terminal to punch a summary paper tape or directly communicates with the computer for analysis of the raw data. The system may be operated in the following mode combinations; group mode, individual mode, individual and group mode simultaneously.

The SRS-1000C Student Response System is composed of five major assemblies; the Student Stations, Instructor's Control Panel, Class Display, Interface Unit and Output Junction Box.

The Syracuse Student Response System (SRS-1000C) was delivered and installed by General Electric in ten desk type tables and four carrels.

Each of the ten desk tables were modified by the project to accommodate the Student Stations and the individual earphones. These ten Student Stations are used primarily for Group Mode presentation even though they have the capability of being used in Individual Mode. However, they do not at this time contain a confirmation capability in the Individual Mode.

The four carrels were each modified and equipped with a rear projection screen, the Student Station, head set, question counter, and an individual confirmation of response mode. The presentation of a filmstrip in the Individual Mode in one of the four carrels is done by way of a carousel slide projector placed on an AV cart behind the carrel. Each filmstrip for presentation in Trial B on the SRS is converted to slides. The presentation is synchronized with the audio tape using the GE AVR Digital Tape Recorder and is totally controlled by the student performing in the carrel.

The slide tray and the audiotape are loaded into the machines by one of the staff members for use by the student. The student seated at the carrel pushes the red button of the SRS to start the slide and audio and to advance the slide to the next frame. During the pre-test the student sees the question, hears it read, and responds by pushing one of the five white buttons on the Student Station. After responding, he pushes the red button for the machine to advance the media. He continues this activity through the pre-test and the media presentation starts. Each frame with accompanying audio is presented and does not advance until the student pushes the red button. After the media presentation, the post-test questions appear. At this point the Individual Confirmation Mode becomes operative. A red light and a green light is located in front of the Student Station. If the student makes a correct response to the question, the green light goes on and the student pushes the red button to advance the machine to the next question. If the student makes an incorrect response to the question, the red light goes on and the student cannot advance the machine until he makes the correct response. Again, as soon as the green light goes on he can push the red button and advance to the next question. As the student is responding, his responses are being recorded on paper tape for later analysis via the computer or, if necessary, they may be fed directly in the computer for analysis.

RESEARCH AND DEVELOPMENT

The research and development emphasis of the project for the past year has been limited to the questions directly related to setting up the evaluation system and determining procedure or decision points. Development has been delayed until the evaluation system has been specified, tried, and operating smoothly. Although no hypothesis testing has yet been done, a number of research questions have been identified and are now being grouped to begin analysis. [illegible] emphasis of research has been to collect three kinds of data [illegible]acteristics, student characteristics, and system characteristics, and to develop the computer interface to process this data.

Media characteristics

Determining the pertinent data to be collected and specified for each piece of media has been no small task. Each identified user group seems to have need for different descriptive elements. A compromise has evolved consisting of the items listed in the Trial A section of this report. Other information that is collected and contemplated include a descriptor set for identification in the ERIC system using the CEC version of ERIC descriptors, vocabulary lists on each media and a master list; evaluative statements from the Trial A procedure; and comments from teachers using the media in the classroom on a loan basis.

Student characteristics

The student characteristics have consisted of assignment of an identification number that denotes handicap, school and classroom; recording IQ subscores of the WISC on all students in the testing population and developing a student personnel reporting form of pertinent data relevant to the project for the use of persons referring children to the Special Education Department.

Since evaluation is dependent upon the performance of the student and involves the complex issue of motivation, the decision was made to observe the behavior of the students not only while they were engaged in the interaction with the SRS, but also during their performance with the media and responses in Trial A and assessing the cognitive styles of the children. Cognitive style refers to the "tempo" with which children respond to various cognitive demands such as viewing films, reading, and test taking.

A student viewing a film or filmstrip by his grunts, groans, nonverbal behavior and comments, is giving the staff member invaluable information that can be related to his failures and successes. These behaviors carefully recorded and interpreted with feed back to the project staff and the homeroom teacher provide information as to the conditions which cue or prompt the desired response and motivate performance. Many times while dealing with the media, it is observed that the non-reading student often forgets to be self-conscious and will make attempts to read the captions of the simplest material. Encouraged by this little success, the student with learning problems may be motivated to read.

During Trial A, the interview technique rather than observation, per se, was used. This was a very practical decision based on the fact that only one staff member was working with the media in each school with either an individual child or group of children. It was not possible for this one person to present the pre-test, the media, and the post-test and make systematic observations of behavior. Therefore, in order to initiate a system for recording some of the behavior, an interview form was developed, used and is now in the process of revision.

The attending behavior of the children during the presentation of the instructional material constitutes an important dependent variable. Data collection for this aspect of the evaluation program will rely heavily on video tape recording of the children's behavior. During Trial B at the Computer Based Project Center and while using the SRS, a systematic observational technique will be initiated utilizing video taping for later analysis and coding of the behavior by the staff. Systematic ways of classifying behavioral observations have been investigated and focus on consideration of each variable such as extraneous bodily movements, general postural considerations, talking, etc. Similar observational and video-taping procedures will be used to observe the children's behavior in a more general learning setting providing a basis for comparing the effectiveness of the SRS and instructional materials as opposed to the more traditional classroom procedures for holding the children's attention.

System characteristics (evaluation model)

The uniqueness of the evaluation model and the questions it poses, do not allow the use of standard statistical designs without violating most of their basic assumptions. The staff chose to create the evaluation model based upon an arbitrary set of assumptions and to arbitrarily set limits for criteria in lieu of trying to meet the statistical assumptions. The main disparity comes from the fact that the model is checking the question set rather than normalizing the student responses, thus standard statistical processes must be applied to the sample *question set* as a population rather than the sample of responses, i.e., the sample of questions would be our data source rather than the sample of students.

A model system is defined in terms of three major testing settings; Trial A, Trial B, and Trial C. Within each of these blocks a number of steps have been outlined to: prepare media and criterion instruments, to develop procedures for the trial, to process the data, and to decide on the next step. The rationale for the model is to obtain as large a representative sample as possible within the staff and time limitations provided by the project. A major question is assigned to each trial to guide in the selection and interpretation of data collected.

Tral A—Are we asking the right questions?
Trial B—Does the media effect a change score?
Trial C—What group of students do best?

Standard research designs and statistical analyses contributed little to a base of assumptions on sample size or the analysis procedures. It was necessary to face these issues logically and create a set of assumptions to use for guides in the decision making process. It is assumed that:

1. The change effect of the media can be indicated by the question asked.
2. If changes occur in a rather sterile presentation, changes would be apparent in a classroom setting.
3. A change from an incorrect response to a correct one is the result of seeing the media.
4. Questions that measure change are valid questions.
5. Children can select the correct response after seeing media.

Sample size was arbitrarily set at seven children representing one from each of three age group levels, the two handicap areas and a junior high educable mentally retarded student. These subjects were picked at random after their school had been identified as part of the sample.

Pre-post testing design

The ultimate criterion of a material's effectiveness is usually considered to be the effect on the pupil's achievement of stated objectives. Difference between measures of pupil achievement before and after exposure to the media have been used to define such gains operationally. The project utilizes the pre-post test design throughout. The pre-post test design requires that gain score related questions be used, therefore the gain score is a criterion of an acceptable question. The literature on pre-post test designs has given some insights into the relationship of normalized statistics and change score items. These insights are being incorporated into the decisions criteria for questions, determining appropriate levels for a given media, and the number of recycles that may be necessary to verify a given outcome. To make use of normalizing statistics, the sample size for Trial B has been kept as near 14 as possible

Computer interface

Several procedures and analysis demanded by the project data have caused extensive use of the computer to keep many variables available for the analysis. Programs have been written and used to give a pre-post test analysis, prepare tests from a question set, produce normalized statistics, alphabetize vocabulary, update master lists and storage files for media, students, and vocabulary. Interrelationships with other data storage systems have been maintained so that compatibility is high. Analysis of tests have been made to establish inter-rater reliability between staff members field testing items. Extensive use is being made of the computer services available to the project.

Because the project goal—creation of the evaluation system—is a new one, no computer programs are ready and therefore must be created on the job. A great deal of "debug" and delay time was experienced this past year trying to fit our data to available programs. A more economical approach is now being studied by creating programs to process the data as it is.

A second concern is the national movement to develop a data bank of information. None of these efforts has progressed to the state of being able to advise others how the data should be prepared and stored. Information is also lacking from the field as to what data is really desired. These two concerns interacting with limited computer storage capacity has caused the project to "tread water" (using a temporary format) until some clarification can be made on the final data storage format.

The ability to handle a bank of data on students, media, questions, vocabulary, etc., has been considered as a major aspect of the project. So many areas of the project have touched on items, procedures and information that just is not available such as:

What is the vocabulary of a child given X, Y, Z?

What questions (form or vocabulary) give greatest gain or change scores?

What media characteristics interact with student characteristics?

The data has the potential answers and the answers would help immensely in the evaluation of present media curriculum, etc., and in the creation of new media. Without the ability to "tease" out answers and group and regroup the data, little can be added to present evaluation efforts. It is therefore a major underlying effort to involve the computer heavily in the management and manipulation of data to establish basic premises from which to evaluate materials. To do so, means trying a relatively untried mode of management, but one which can eventually give the information necessary for valid evaluation.

The project provides a unique approach to changing the teaching behavior of teachers of the handicapped. As a long range goal, it is seen as developing a new system of education of handicapped children utilizing a Teaching Learning Management System with a data bank of validated instructional materials. The present focus is on training the currently employed teachers in special education to develop measurable behavioral objectives for their units of instruction and at the same time emphasizing the importance of specifying terminal behaviors and demonstrating that learning results from the process of instruction.

An immediate problem for the project, however, was preparing the films and filmstrips for Trial A, and at the same time eliciting the cooperation and support of the teachers in whose classrooms the project staff would be working to evaluate the questions and material with the handicapped students. The original proposal requested a summer workshop in which to work with a large number of special education teachers in order to acquaint them with the process of developing behavioral objectives. The major problems have been determining precisely what a student has or has not learned following instruction and finding a means of determining the effects of the variety of instructional methods on each of the areas of learning; motor, perceptual, language and symbolic. The plans for such a workshop were changed to that of involvement of special education teachers on a part-time basis to review the media, establish the behavioral objectives and write questions in order to achieve our objective through a far more relevant and meaningful activity. This move actually accomplishes three major objectives at one time: the preparation of media for evaluation, acquainting the teachers with the project, and establishes a base for using a behavioral approach in their classrooms. Application of these procedures provides the teacher with basic information for planning, implementing and evaluating the effects of the instructional program satisfying specific terminal behaviors.

The involvement of the special education teachers in the ongoing activities of the project has been extremely successful. Certified special education teachers within the Syracuse City School District, after completing the first five lessons of Designing Effective Instruction (*1*), were appointed on an hourly basis to review the media being prepared for Trial A and develop a pool of criterion referenced questions on each piece. A total of twelve teachers completed the first five lessons of the DEI course. Five became involved with the activities of the project. These non-staff writers have made three notable contributions to the project: (1) It has insured that a far greater number of films and filmstrips have questions written for them in a much shorter period of time. (2) The core of special education teachers who have become trained question writers will, hopefully, become the teachers involved with the field testing in Trial C. (3) The teachers who are active in the project play an important public relations role in their respective schools.

As the staff became more sophisticated in selecting objectives and writing questions to test objectives based on content contained in the media, they realized that such a shallow approach was not contributing to the evaluation of the more complex areas of learning. It became obvious that what was needed was a restructuring of the objectives in terms of useful, functional behaviors and not mere testable statements of content.

If one looks at the expected out-put of educational process, it is essential for curriculum efforts to be focused on developing abilities to think and solve problems—not memorization of information. Problem solving skills and processes are needed and should receive direct instructional attention. Because of this concern, the project staff began investigating a number of learning and curriculum models which would provide a framework within which to direct their attention and energies in developing the educational objectives.

Under close scrutiny is the work of Mary Meeker with Guilford's Model described in the *Structure of the Intellect* (*2*). The model she describes appears to provide direction for the education of handicapped children by focusing on the behavioral and learning deficits of the children and NOT on the deficiencies, per se. However, the use of this design as a move toward total individualized instruction to improve the discrete areas of intellectual ability of the children appears to contain a void in applying intellectual ability to learning to live in a complex society. An investigation of the Social Learning Curriculum being developed by Dr. Herbert Goldstein (*3*) seems to provide additional definition and classification needed for a complete educational approach through curriculum. Using the Meeker Model to identify the areas in the ability to learn and the Social Learning Curriculum to apply these learning skills would encompass all the areas of experience needed to live effectively and productively. The student, using the combination of approaches, would be expected to develop his mental processes and apply them to solving problems in a variety of social situations.

LIST OF REFERENCES

(*1*) *Designing Effective Instruction*, General Programmed Teaching, Box 402, Palo Alto, Calif.

(*2*) Meeker, Mary M. *Structure of Intellect, Its Interpretation and Uses*, Charles E. Merrill, 1969.

(*3*) Goldstein, Herbert. *Social Learning Curriculum F.G.S.*, Yeshiva University, New York, N.Y., 1969.

CONCLUDING REMARKS

Gilbert L. Delgado, Ph. D., Chief, Media Services and Captioned Films, Division of Educational Services, Bureau of Education for the Handicapped, Office of Education, U.S. Department of Health, Education, and Welfare, Washington, D.C.

To conclude the program, let me express sincere gratitude to everyone who had a part. I know a great deal of work has gone into these presentations. Since we did not have any media "breakdowns," I can safely say that media *does work* in the hands of skilled users. My special thanks to Dr. Jackson and his staff for providing the multimedia overview of media training and development activities in the field. I would like to repeat my comment of this morning. In deaf education, we must keep abreast of what is happening in *all* special education. Melcher has warned that the deaf can be lost in the shuffle. All of us should be active in other activities in special education. This should be on a project basis, as Dr. Newburg has suggested, through the SEIMC/RMC Network and the more than 300 associate centers. Similarly, we need to have more input to the Council for Exceptional Children to insure that their programs, conventions, and so on place more emphasis on needs of the deaf. Thank you for being with us.

Thursday, July 1, 1971

Coaches and Physical Education—ASB Dining Room

9:00 a.m.–2:30 p.m.: *Chairman:* Warren W. Fauth, Athletic Director, California School for the Deaf, Riverside; *Recorder:* Laurence Beaver, Boys Physical Education Director, Kansas School for the Deaf.

9:00 a.m.–9:15 a.m.: Introductions and registration of coaches and physical education instructors.

9:15 a.m.–10:00 a.m.: "*The Present Status of Physical Education and Sports Programs in Residential Schools for the Deaf,*" Warren Fauth, Athletic Director, California School for the Deaf, Riverside. Discussions and questions from the floor.

10:15 a.m.–11:45 a.m.: Panel Discussion: *Participants:* Paul Barr, Athletic Director, Maryland School for the Deaf, Virginia Stevenson, Physical Education, Arizona School for the Deaf and Blind, James Alsobrook, Athletic Director, Florida School for the Deaf, Clarence Davis, Athletic Director, Missouri School for the Deaf, Dale McMahan, Athletic Director, Louisiana State School for the Deaf, Stephany Beaver, Physical Education, Kansas School for the Deaf; *Topics:* (1) Aids in Curriculum development for physical education; (2) Girls Physical Education—Instructional, recreational, intramural and interscholastic; (3) Relationship of physical education to other departments in the school. Problem areas—communication, scheduling, sports and recreation; (4) The role of individual sports such as: tennis, golf, bowling and swimming.

11:45 a.m.–1:30 p.m.: Lunch.

1:30 p.m.: "*Physical Education for the Deaf Multi-Handicapped,*" Peter C. Lanzi, M.S., California School for the Deaf, Riverside; Discussion and questions.

THE PRESENT STATUS OF PHYSICAL EDUCATION AND SPORTS PROGRAMS IN RESIDENTIAL SCHOOLS FOR THE DEAF

Warren Fauth, M.A., Athletic Director, California School
for the Deaf, Riverside

Statistical information, although often necessary, does not make interesting reading nor listening, so this report of the state of physical education in schools for the deaf will be general rather than numerical. The returns on the questionnaire[1] I sent out were surprisingly high indicating considerable interest on the part of coaches, athletic directors and others in what is happening in physical education. The results show that almost every residential school has a regularly scheduled physical education program. In general this applies to all levels from elementary to high schools with fewer schools having elementary programs than in Junior High and High Schools.

Most of the schools have physical education at least three times a week for all of their students however, a small number have the program only once or twice a week. Virtually all of the schools indicated that grades are given for physical education classes.

The residential schools for the most part offer recreational programs and sports for both boys and girls in addition to regularly scheduled physical education programs. In some cases the regular physical education classes are scheduled after the academic classes.

A little over half of the schools replying have a regular course of study for their physical education program. Of this group most schools have an adopted curriculum for the deaf most of which are based upon the state curricula.

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[1] See Appendix.

Schools reported having from one to eight physical education instructors in their programs, but this includes part time as well as full time teachers. The average is about three teachers for each school but this varies with the size of the school. Three-fourths of these instructors are certified physical education teachers but only about a third are trained teachers of the deaf. Male physical education teachers outnumber females by about 2 to 1 and about one-fourth of the physical education teachers are deaf.

In summarizing the physical education programs in residential schools for the deaf it seems that the deaf students in these schools are receiving regular physical education programs by certified and trained personnel, based on state curricula, adapted for the deaf. The major criticisms would be that in many cases the number of teachers is small compared with the number of students, and perhaps more schools should have regular physical education classes more times per week. It must be noted that most schools have recreation and sports programs in addition to the regular physical education program which may meet the needs of students not having daily physical education classes. It would seem that virtually all of the deaf students in residential schools are getting exercise, learning skills and developing physical fitness in some manner under the direction of competent teachers.

The deaf have a right to take pride in their participation and success in interscholastic sports. By their very nature schools for the deaf are limited in size, yet schools for the deaf actively participate in a great number of interscholastic sports by both boys and girls. Deaf boys from almost four-fifths of the schools replying participate in basketball and track and field. More than half the schools play football, some 11-man, some 8-man, pee-wee and flag. In order of popularity deaf boys participate also in wrestling, soccer, baseball, cross-country, swimming, softball, tennis and golf. The girls too are quite active, with basketball and volleyball the major sports. Deaf girls also compete in track and field, softball, field hockey, swimming, bowling, golf, tennis, badminton and cross-country. All in all this is a fine achievement for schools that are limited in size but apparently not in talent.

Because of the number of interscholastic sports entered into by schools for the deaf and the limited numbers of players available to coaches the percentage of students participating in sports is extremely high.

Participation in the sports program by 75 percent or more of the eligible boys is not uncommon in the residential schools for the deaf.

The kind of competition is also interesting to note as almost all of the schools compete against both deaf and hearing teams. More than three-fifths of the schools belong to their state athletic associations and more than half are affiliated with a recognized league. Basketball is the number one sport between schools for the deaf with three-fourths of the schools playing at least another school for the deaf in this sport. Football and track are next in popularity followed by wrestling, baseball and cross-country. The girls are evenly divided between volleyball and basketball in their games with other schools for the deaf. There is also limited competition in track, softball, soccer and field hockey by the girls.

For the 45 schools replying to the questionaire a total of 173 coaches was tabulated, this includes both male and female as well as part time and assistant coaches. More than three-fourths of the coaches are members of the faculty and are trained teachers of the deaf. Most of those who are not members of the faculty are counselors, student assistants, or other staff members. Male coaches outnumber the women by 3:1 while deaf coaches are also outnumbered 3:1 by hearing coaches.

It would seem that the handicap of deafness is not a factor in participation in interscholastic sports. On the contrary our deaf boys and girls seem eager and willing to participate in almost all of the sports offered at the high school level. They compete as equals with both hearing and deaf teams and in most cases are subject to the rules and regulations of either the state athletic association or their league or both. This means that they comply with rules concerning age, years of participation, scholastic requirements and the like just as hearing students in their state do. In sports the deaf ask for no favors and receive none. In the trophy cases of these schools are the proof that the deaf can compete in a hearing world.

As with the physical education programs, the general view of sports for and by the deaf looks good. That is not to say that the sports program cannot be improved. It can and it will be. Sports are perhaps the best single way of promoting public relations. It is necessary therefore, for our coaches to emphasize good sportsmanship, good dress and grooming and exemplary behavior on the part of his teams. Another area which needs further development is in girls sports. Like it or not Women's Lib is with us and the ladies demand recognition and an opportunity to participate. Some state athletic associations are beginning to include girl's sports and we will see more competition in this area. May I offer the members of this section a pat on the back for a job well done, remembering of course, that all of us need to strive to do an even better job in the future.

Appendix

RESULTS OF PHYSICAL EDUCATION AND SPORTS QUESTIONNAIRE

Questionnaires Sent: 52
Questionnaires Received: 45

Physical Education Program

1. Do you have a regularly scheduled physical education program?
Yes—44; No—1.
2. Does your program include all of the students in your school?
Yes—38; No—16.
Which levels? Elementary—5; Junior High—4; High School—1.
3. Does your program offer a regular period of physical education?
(Every day)—20: (Twice a week)—8; (Three times a week)—7; (Once a week)—2; (Different times for different students)—5; (No answer)—2.
4. Are grades given for physical education classes?
Yes—40; No—4; No answer—1.
5. Is an after-school program of recreation given?

(In place of P.E.)—5; (In addition to P.E.)—31; (For Boys only)—3; (For both boys and girls)—30; No—9.

6. Do you have a regular course of study for your physical education program?
Yes—27; No—18; (State curriculum)—6; (Adapted curriculum for the deaf)—20; (City)—1.

7. Give the total number of instructors in your physical education program: 149.

Number of certified physical education teachers—106; Trained teachers of the deaf—52; Male—94; Female—55; Deaf—39; Hearing—110.

Interscholastic Sports

1. Does your school have an interscholastic team in:
Boys: 11-man football—19; other football—7; basketball—40; wrestling—13; track and field—36; swimming—1; baseball—7; tennis—1; golf—1. *Girls:* basketball—22; track and field—14; volleyball—20; softball—4; swimming—2; tennis—1; golf—1; other—bowling—2; field hockey—5; cross-country—1; badminton—1.

2. Is your school a member of your state athletic association?
Yes—31; No—14.

3. Is your school a member of a recognized league?
Yes—25; No—19; No answer—1.

4. In what sports do your boys play other schools for the deaf?
Football—15; Track—14; Basketball—41; Wrestling—4; Cross-country—2; Baseball—2.

5. In what sports do your girls play other schools for the deaf?
Volleyball—14; Basketball—14; Track—1; Softball—1; Soccer—1; Field Hockey—1.

6. Name your coaches and indicate by letters if they are:
(a) Physical education instructors—104; (b) Certified teachers of the deaf—122; (c) Member of the faculty—150; (d) Members of the staff other than teachers—7; (e) Non-members of the staff—3; (f) Male—130; (g) Female—43; (h) Deaf—43; Total—173.

PHYSICAL EDUCATION FOR THE DEAF MULTIHANDICAPPED

Peter C. Lanzi, M.S., California School for the Deaf, Riverside

Any intelligent approach to the subject of physical education for the multihandicapped demands that we settle at once upon an adequate and acceptable definition of the term physical education. Such procedure will tend to minimize the confusion, contradictions, and misunderstandings with which this phase of education is forced to contend.

Traditionally "education" has been thought of by the layman and even by some educators as a process of acquiring knowledge through the medium of the school. But, happily, this extremely narrow concept of education is being discarded. We are coming now to think of education not as "schooling" alone and not altogether as "learning", but rather as a continuous, lifelong process of change. Modifications or adjustment of the individual, in school or out of it, resulting from his own responses to the stimuli or situations of his external or internal environment. These changes resulting from activity affect the physical, emotional and moral or ethical aspects of the individual's life as well as the mental aspect, and the effects may be far better or far worse according to accepted standards.

Just what physical education will mean for the individuals in multiply handicapped classes will depend upon the types of responses induced on the part of the students. If the total situation results in no more meaningful reactions than exercises done to command, then physical education in this particular method will mean little aside from strictly physical training. But, if, on the other hand, the total situation results in frequent and desirable reactions of an intellectual, social and moral type as well as the muscular type, the program becomes one of great educational significance.

Physical education should never be thought of as a frill or ornament activity attached to the school, but rather as an integral phase of the project of educating the whole individual. When this understanding of the nature of physical education becomes generally accepted, we may look for less confusion about the subject and for more intelligent progress in the field.

In our field, multi-handicapped refers to defective hearing plus other handicaps. Hearts permanently damaged by congenital defect or infectious disease, arms and legs crippled by congenital defect or infectious diseases, and undeveloped bodies suffering from malnutrition are with us always, as are faulty heredity, ignorance on the part of parents and deplorable living conditions, and they all contribute to the problem, particularly when there is a mental deficiency. However, in the program at C.S.D.R. the majority of the multihandicapped are deaf emotionally disturbed and/or mentally retarded. Many of these students have additional handicaps including cerebral palsy and perceptual difficulties.

Organized physical education should aim to make the maximum contribution to the development of the individual's potentialities in all phases of life, by placing them in an environment as favorable as possible to the promotion of such responses or activities as will best contribute to the purpose. To this end muscle tone and ability to use muscles effectively as well as the development of a general quality of coordination are important, but have little to do with the size of muscles.

In this area skilled teachers are most important. Among the many specific requirements listed for the teachers, the following are of special significance:

1. Love the children, and the children will love you, thus maintaining a line of discipline.
2. All individuals in the program must be considered, not just a few individuals.
3. Guidance is very important and the teachers must take advantage of their opportunities along this line.
4. The program must be made one of joyous living in the present.
5. Teachers should think in terms of carry-over values.
6. Teachers must have the capacity for great understanding.

The aim or ultimate purpose of physical education is analyzed into a number of general objectives all of which are most important in working with the multi-handicapped.

1. The development of organic power (the term organic refers to the heart, digestive system, excretory and nervous system).

2. The development of skills.
3. The development of desirable social habits and attitudes.
4. The development of a love of wholesome play and recreation.

To achieve all of these we must analyze these problems within the child:

1. What are the needs for development and adjustment.
2. What activities will best contribute to his interest and satisfaction.
3. What are the characteristics of an environment which will best promote such desirable activities.

The following are ways of determining the needs of the individual:

1. Frequent tests of the individual skill in muscular activities and ability to control bodily movements. (Keep regular charts of motor and muscular tests.)
2. Evaluation from time to time of the individual's social characteristics.
3. Evaluation of the individual's interest in physical education.

Among the psychological needs are the:

1. Need for development of emotional controls.
2. Need to develop control of a variety of willed bodily movements.
3. Need for development of resourcefulness, initiative and capacity for quick and accurate mental reactions when under pressure.
4. Need for opportunity for wholesome expression of human tendencies to action. (Many abnormalities of personality and many forms of antisocial behavior are found in connection with this need.)
5. Need to develop interest in wholesome recreation.

The social needs are:

1. Need for the cultivation of an attitude of cooperation.
2. Need for the development of interested participation in stimulating activities with a strong emotional element.

What types of activities contribute to meeting the need of deaf multi-handicapped students? In this connection one policy only is necessary: namely, to determine as accurately as possible the activities which give the greatest promise of meeting the specific needs of the particular individual.

The fundamental consideration in the selection of the activities are the needs of the individual or group being educated.

The best program of activities is the one which gives the greatest promise of meeting the needs. This line of thought leads to the conclusion that in the selection of an activity or a program of activities to meet the needs of a specific individual or group, we must properly take into account all the factors involved in the problem. The following are highly important:

1. The inherent interests and characteristics of children at various stages of development.
2. The level of fundamental skills in the group under consideration.
3. The physical condition of the individuals being considered.
4. The personality of the group with which we are working.

5. Sex must be taken into account. (There are many physical education activities which can be carried on profitably in mixed groups of boys and girls.)

6. Values desired—naturally some activities are more desirable and valuable from a physiological point of view than others.

7. Teacher load (a minimum of 10 students and no more than 12 at any time).

8. Time allotment—to be effective, daily programs must be a minimum of one and one-half hours duration.

9. To develop student leadership, each student must be given an opportunity to be responsible for group activities at various intervals during the year.

Value of activities:

1. The value of the activities of the curriculum should be evaluated according to their relative worth in terms of physical, intellectual, social, safety and recreational contributions.

2. The allocation of activities to appropriate age levels.

3. The appropriate amounts of times to be devoted to the activities.

4. An analysis of the basic elements of each activity and the time required for instruction in each activity.

Prominent characteristics and needs of the multi-handicapped child:

1. Poor powers of attention.
2. Controls of bodily movements not well established.
3. Active curiosity and vivid imagination.
4. Lacking in cooperation.
5. Moral standards lacking.
6. Highly individualistic, independent.
7. Aggressive tendency prominent resulting in pushing and fighting.
8. Slow physical development.
9. Susceptibility to fatigue.
10. Lack of physical power.
11. Periods of slow growth.
12. Awkwardness.
13. Short attention span.
14. Inability to wait for instructions.
15. Emotions uncontrollable.
16. No competitiveness.
17. Girls more mature than boys.
18. Strong desire to belong.
19. Moodiness and day dreaming.
20. Curious about many different things surrounding them.

Perhaps the most important and successful activity for the deaf multi-handicapped child, especially those with emotional problems, is swimming. The water and its buoyancy seems to have a calming effect on hyperkinetic and emotionally disturbed students. This exceedingly healthful exercise has important therapeutic values, both mental and physical.

Although many of the students in our program had a fear of the water, after a few lessons and careful training they eventually learned to enjoy the water and in a matter of 8 to 9 weeks learned to swim. Because of the relaxing effect of swimming on these deaf, emotionally disturbed children early morning classes were scheduled so the students could start the day in a frame of mind ready for learning.

A daily program of calesthenics is offered not as a training tool but as an experience of pleasurable endurance. Each student has an opportunity at some time to lead an exercise. Especially effective is having all the students count cadence at the top of their lungs.

Games are very useful for several reasons, rules must be observed on the playing field just as in the classroom. In addition cooperation, teamwork and good sportsmanship can be taught effectively in game situations. Races and relays, where cooperation is important, are fun and useful as learning experiences.

Although at this stage our students are not capable of sports with rigid rules they are given opportunities to play with plastic bats and balls making their own simple rules in their games. They also play their own form of soccer, kickball and basketball.

The balance beam has proven useful with these students for improving coordination, balance and posture.

The deaf multi-handicapped program at the California School for the Deaf is based upon a system of contingency management in which rewards are given for completion of each task. In this connection the students are rewarded for being properly dressed for P.E. and for success in various P.E. activities.

Although our program is still in the experimental stage many signs point to the fact that physical activities are an essential part of their educational program. The tensions and emotional problems become lessened as the child develops his physical capabilities resulting in better participation in classroom activities.

This is a new and growing field and as P.E. instructors we will be more and more involved in programs with the deaf multi-handicapped. Much of the success of such programs will depend on our ability to relieve the tensions and disturbed emotions of these students so they can function more normally in their academic classes. It is up to us to minimize their handicaps as much as possible and permit them to compensate for their handicaps by success in the areas where they are capable of success.

Audiologists—Lower School Library

9 a.m.–2:30 p.m.: *Chairman:* Dr. Jerome G. Alpiner, Director University of Denver Speech and Hearing Center.

9 a.m.–9:45 a.m.: "*The Audiologic Assessment of Deaf Students,*" Lyle L. Lloyd, Mental Retardation Program, National Institute of Child Health and Human Development, Bethesda, Md.

9:45 a.m.–10:30 a.m.: "*An Auto-Tutorial Approach for Exploring the Sensory Capabilities of Young, Hearing Impaired Children,*" Dr. Carl Binnie and Dr. David Goldsten, Department of Audiology and Speech Sciences, Purdue University, Lafayette, Ind.

10:30 a.m.–11:15 a.m.: "*A Linguistic Approach to the Teaching of Speech-reading: Theoretical and Practical Concepts,*" Dr. Raymond H. Hull, Director of Audiological Services, University of Northern Colorado, Greeley, Colo.

11:15 a.m.–11:45 a.m.; Discussion Period.

1:30 p.m.–2:15 p.m.: "*An Infant Developmental Language Program,*" Carol Amon, Instructor, Department of Speech Pathology and Audiology, University of Denver, Denver, Colo.

THE AUDIOLOGIC ASSESSMENT OF DEAF STUDENTS

Lyle L. Lloyd, Ph. D., Mental Retardation Program, National Institute of Child Health and Human Development, Bethesda, Md.

The purpose of a comprehensive audiologic assessment is to describe an individual's auditory abilities and functioning in a manner that will facilitate medical and non-medical (re)habilitation. The present paper is concerned primarily with non-medical or communication habilitation. Unfortunately, some people testing the hearing of deaf individuals provide only limited information and some educators fail to demand more complete information. Sometimes educators fail to demand more audiologic data because they think it is too difficult to obtain comprehensive data from severely deaf individuals, or because they have difficulty seeing the educational value of some of the audiologist's test results. Admittedly, it is difficult to test some deaf children, but that should not stop us from attempting to obtain the information we are technologically capable of obtaining (Fulton and Lloyd, 1969). Also some of the audiologist's "fancy" test results and "technical jargonies" reports are estoeric and difficult to relate to the educational needs of a given child. If the educator is to meet his full responsibility to the deaf, he must "keep the audiologist honest" and demand the same comprehensive audiologic assessment for deaf children as can be provided those with less severe hearing impairments. Gone are the days of thinking pure-tone thresholds, and in some cases speech awareness levels may be accepted as complete hearing test results on the deaf. Programs for the deaf must start using additional information if they are to provide optimal communication habilitation.

The purpose of this paper is to suggest an extensive, basic, audiometric battery as a part of a comprehensive audiologic assessment that could be adopted by programs for the deaf. An audiologic assessment is based upon (1) case history, (2) related educational, social, and psychological information, (3) otologic and general medical findings, (4) audiometric data, (5) non-audiometric receptive communication data, and (6) expressive communication data. These 6 kinds of information are listed to emphasize the distinction between an audiologic and an audiometric assessment. The audiometric assessment must be considered in the context of the audiologic assessment, but because of time limitations, the present paper will be primarily concerned with the audiometric battery.

Prior to presenting the basic audiometric battery it seems appropriate to consider some of the fundamentals of the audiometric process. Reliability is a prerequisite to obtaining valid data. Audiometric reliability is dependent upon careful attention to such variables as: (1) acoustic and other environmental factors, (2) calibration, (3) instructions (including linguistic and communicational variables), (4) responses criteria, (5) response mode, (6) threshold searching methodology and criteria (in the case of threshold measures), (7) stimulus specificity and control, and (8) linguistic variables of the stimulus (in the case of speech audiometry).

Brief discussion of acoustic stimuli is necessary when one considers the above variables along with the following two points: (1) the validity of the results of some procedures is related to the type of stimulus used and (2) the stimulus-response relationship is the cornerstone of all audiometry. A wide variety of acoustic stimuli are

TABLE I – CONTINUUM OF ACOUSTIC STIMULI RELATIVE TO SPECIFICITY AND CONTROL. Since various environmental sounds may fall at a number of points along the continuum they are shown in parenthesis at their three simplest levels. Sounds from noisemakers, toys, musical instruments, and animals have been omitted to simplify the table, but they may be considered along with environmental sounds. It should also be noted that for speech type stimuli, synthetic speech such as that produced by the Bell or Haskins Laboratories for experimental purposes would rank higher in specificity or control than human speech. The stimuli may also be considered along a continuum of human communicative value.

Relatively Easy to
Specify and Control
"Most Analytic"

Low Human
Communicative
Value

Pure tones, clicks,
Narrow band noise, etc.

White noise, "sawtooth" noise

Several bands of noise

(environmental sounds)

"Isolated" Speech Sounds

(environmental sounds)

Nonsense syllables

(environmental sounds)

Monosyllabic Words

Dissyllabic Words

Phrases and word chains

Sentences and longer word chains

Continuous Discourse

"Normal Conversational--"
or
"Everyday Speech"

Relatively difficult
to specify--control
"Least Analytic"

High Human
Communicative
Value

available as shown in table 1. These stimuli range over a continuum of degree of specificity or control. Table 1 lists the stimuli from easiest to specify or control to most difficult to specify or control acoustically. The acoustic stimuli listed may also be considered along a continuum of human communicative value representing the frequency of human use in oral communication. In general, the communicative value continuum also represents an approximate ordering of the stimuli in terms of communicative importance. The importance ordinarily holds true for most oral communication but in some cases a single monosyllable word such as "stop!" or "help!" (which linguistically may be a sentence) may have more communicative importance than conversational speech such as ". . . I am not sure which dress. . ." Unfortunately for the audiologist attempting to reliably and validly assess an individual's auditory abilities and functioning for communication programming the two continua run counter to each other or have a negatve relationship. The stimulus that is easy to specify and control increases reliability, but tends to have little communicative value and less face validity for communication programming. The stimulus with high communicative value (and validity) is the most difficult to specify and control (for reliability). Therefore, the audiologist must consider both factors and make a compromise. He uses the stimulus that offers the highest face validity and specificity. Puretones are used to measure basic sensitivity, while speech stimuli may be used to measure higher level functions of speech discrimination.

With this background let us reexamine the general purpose of a comprehensive audiologic assessment as stated at the beginning of the paper. We can focus on specific areas of auditory abilities and functions in the audiometric assessment. In this discussion we should consider the specific auditory behaviors and aspects of the type of pathology that have major implications for communication programming as follows: (1) auditory sensitivity across the frequency range, (2) stability of the auditory sensitivity, (3) dynamic range and tolerence, (4) recruitment or distortions of loudness, (5) basic auditory discrimination, (6) speech discrimination, (7) habituation and fatigue, and (8) interaural differential of the above measures.

The educator must have information on each of the above 8 auditory behaviors (and their communication implications) for each student if he is to plan the most effective program for his deaf students. Although, time does not permit an extensive discussion, a few illustrations of the communication programming implications of such auditory behavior and how these behaviors are related to different types of pathology seem appropriate. (This discussion was done with overhead transparencies and a printed text was not submitted for the proceedings).

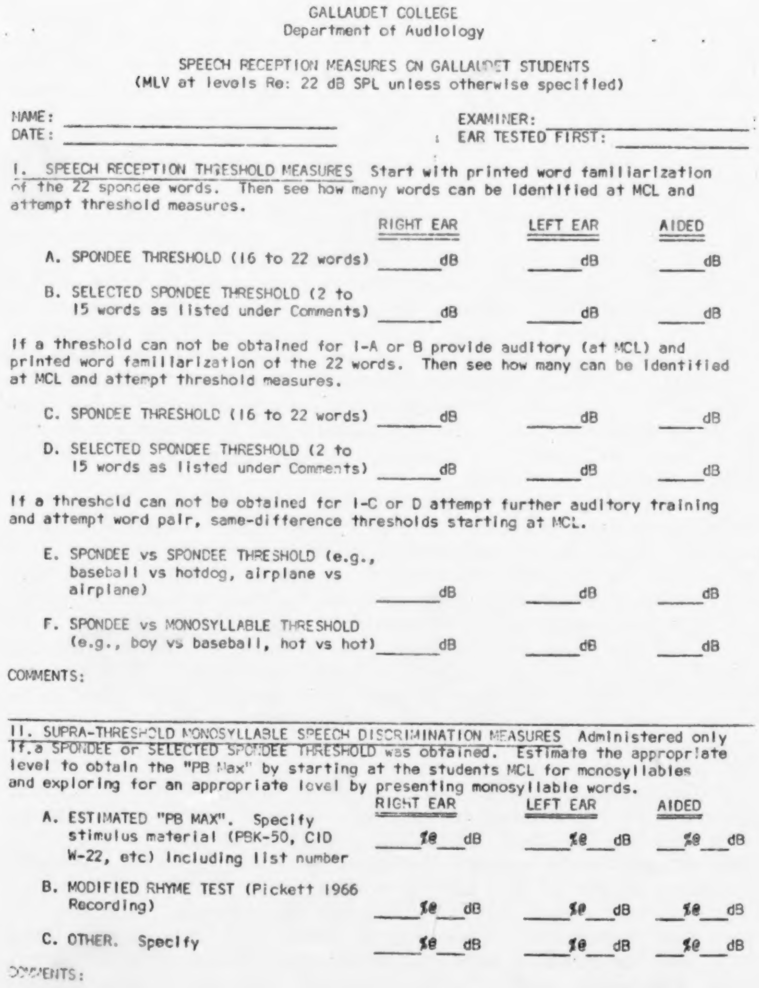
With this focus on specific auditory behaviors that have direct implications for communication programming I would like to propose a basic audiometric battery be adopted by all schools for the deaf. Naturally, some of the more progressive schools, with established audiologic programs, would include additional audiometric procedures. The proposed basic audiometric battery is designed for school age deaf children (and the adult deaf). With only minor limitations the battery can be used with younger children.

The basic battery includes the following measures: (1) air conduction puretone thresholds, (2) bone conduction puretone thresholds, (3) speech reception thresholds, (4) speech discrimination measures, (5) most comfortable and uncomfortable levels, and (6) continuous and interrupted Bekesy tracings. These six kinds of audiometric measures will be briefly elaborated upon in the following paragraphs with a brief discussion of how each is used to define one or more of the above auditory behaviors. In general, the measures should be made bilaterally.

Air conduction puretone thresholds should be obtained at the octave intervals of 250 through 8000 Hz. All frequencies should be attempted even if the thresholds are beyond the limits of the audiometer at one or more frequencies. Otherwise some islands of hearing that may facilitate communication may be missed. Islands of hearing may even interfere with communication. It is also desirable to obtain interoctave thresholds if there is a marked difference in the threshold level of two adjacent octave frequencies and next to any frequency that has a threshold beyond the limits of the audiometer. Puretone air conduction thresholds provide the basic information about the student's auditory sensitivity across the frequency range and is important in terms of what he can and cannot hear, both in terms of speech and non speech sounds. Puretone thresholds provide us with the basic functional relationship between the individual and his acoustic environment. They have implications for the use of amplification. In the case of infants, a first approximation of appropriate level and type of amplification may be primarily based upon puretone data (or frequency modulated or warble tones). In the case of infants, the audiologist initially may not test all six frequencies but select a low, middle, and high frequency and interpolate from his data until further testing is accomplished. Repeated thresholds provide an index of stability.

Bone conduction puretone thresholds should be obtained for the octave frequencies 250 through 4000 Hz. (again, interoctave frequencies may be tested if clinically indicated). These measures may be obtained from the forehead to see if there are responses within the limits of the audiometer. If so, is there a significant air-bone gap? If there is a significant air-bone gap, then bilateral measures (with masking) will be needed to obtain interaural differential. The air-bone relationship is a primary basis for the differential diagnosis of conductive, sensori-neural, and mixed types of pathology. Although most of the hearing impairment in deaf-individuals is sensori-neural, some conductive losses will be discovered upon initial evaluation and the conductive component of a mixed loss will be revealed for some deaf individuals. Different types of pathology result in different auditory behavior. This information has implications for the use of amplification and in some cases for medical restoration. Consideration of how the individual responds to bone conducted puretones in light of responses to air conducted puretones along with other known information about bone conducted stimuli provides the audiologist with information about validity.

Speech Reception Thresholds should be obtained with spondee words (Hirsh, *et al*, 1952). However, many deaf individuals will not



GALLAUDET COLLEGE
Department of Audiology

SPEECH RECEPTION MEASURES ON GALLAUDET STUDENTS
(MLV at levels Re: 22 dB SPL unless otherwise specified)

NAME: ____________________ EXAMINER: ____________________
DATE: ____________________ EAR TESTED FIRST: ____________________

I. SPEECH RECEPTION THRESHOLD MEASURES Start with printed word familiarization of the 22 spondee words. Then see how many words can be identified at MCL and attempt threshold measures.

	RIGHT EAR	LEFT EAR	AIDED
A. SPONDEE THRESHOLD (16 to 22 words)	____dB	____dB	____dB
B. SELECTED SPONDEE THRESHOLD (2 to 15 words as listed under Comments)	____dB	____dB	____dB

If a threshold can not be obtained for I-A or B provide auditory (at MCL) and printed word familiarization of the 22 words. Then see how many can be identified at MCL and attempt threshold measures.

C. SPONDEE THRESHOLD (16 to 22 words)	____dB	____dB	____dB
D. SELECTED SPONDEE THRESHOLD (2 to 15 words as listed under Comments)	____dB	____dB	____dB

If a threshold can not be obtained for I-C or D attempt further auditory training and attempt word pair, same-difference thresholds starting at MCL.

E. SPONDEE vs SPONDEE THRESHOLD (e.g., baseball vs hotdog, airplane vs airplane)	____dB	____dB	____dB
F. SPONDEE vs MONOSYLLABLE THRESHOLD (e.g., boy vs baseball, hot vs hot)	____dB	____dB	____dB

COMMENTS:

II. SUPRA-THRESHOLD MONOSYLLABLE SPEECH DISCRIMINATION MEASURES Administered only if a SPONDEE or SELECTED SPONDEE THRESHOLD was obtained. Estimate the appropriate level to obtain the "PB Max" by starting at the students MCL for monosyllables and exploring for an appropriate level by presenting monosyllable words.

	RIGHT EAR	LEFT EAR	AIDED
A. ESTIMATED "PB MAX". Specify stimulus material (PBK-50, CID W-22, etc) including list number	____%@____dB	____%@____dB	____%@____dB
B. MODIFIED RHYME TEST (Pickett 1966 Recording)	____%@____dB	____%@____dB	____%@____dB
C. OTHER. Specify	____%@____dB	____%@____dB	____%@____dB

COMMENTS:

respond to the standard spondee threshold procedures (Unpublished data indicates only approximately 55% of the students entering Gallaudet in the fall of 1968 yielded meaningful spondee thresholds). If relatively conventional spondee thresholds can not be obtained, other types of speech stimuli should be used to obtain some index of the speech reception threshold and gross discrimination of speech at threshold. One can work down from the spondee vs. spondee to the simpler spondee vs. monosyllable discrimination. This latter type of discrimination may be based primarily upon duration, but at least, it gives some index of auditory discrimination. We developed a systematic procedure to obtain this measure on all students entering

Gallaudet. The score sheet for this procedure is shown in Figure 1. We started at the top and worked down until we could obtain some measure. It should be noted that along with the hierarchy of difficulty this procedure starts by ultilizing the familiarization procedure recommended by Tillman and Jerger (1959) and then incorporates additional familiarization as may be necessary. With only minor modification speech reception measures such as these can be obtained from younger children.

In addition to providing an index of basic speech discrimination the speech reception threshold provides a reliability and validity check on the puretone threshold. Interest comparisons are critical to making judgments about reliability and validity. In a few cases, deaf individuals lack sufficient residual hearing and listening experience to make even the gross bisyllable vs. monosyllable discrimination. In such cases the audiologist may obtain a speech awareness threshold (or speech detection threshold) to use as a gross corroborator of the puretone thresholds, but this does not provide an index of threshold level speech discrimination. The audiologist may also experiment with auditory training during his attempts to obtain speech reception thresholds.

One additional comment about speech reception thresholds. Most audiologists use a primarily descending threshold searching methodology to obtain speech reception thresholds. However, many audiologists use the ascending method for puretone thresholds (Carhart and Jerger, 1959). Since comparison of puretone and speech thresholds are frequently made, it would be desirable to use the same threshold searching methodology (ascending, descending, or bracketing) to reduce this as a source of measurement error. There are no definitive data to strongly suggest one method over the other. Carhart and Jerger (1959) have recommended using the primarily ascending approach. Lloyd (1966; Lloyd and Fulton, 1969; Fulton and Lloyd, 1972), using an operant approach to behavioral audiometry, has suggested several advantages of the primarily descending approach for the difficult-to-test since supra-threshold presentations built into the threshold searching procedure appear to: "(a) have greater consistency between the training (teaching) and threshold-searching stages of the testing session, (b) provide more opportunity to administer reinforcement for appropriate responses, (c) have the teaching of responding to lower and lower sound levels built into the method, and (d) better approximate errorless learning." Therefore, until further research indicates differently the descending method is being suggested for testing most deaf individuals.

Speech Discrimination Measures should be obtained with some type of monosyllable words for all individuals for whom a spondee threshold is obtained. In most audiology clinics CID W-22 (PB) words (Egan, 1948) have been used for this measure, but PBK-50 (Haskins, 1959) words have also been used on the assumption that they are of a less difficult familiarity level. The W-22 and PBK-50 words offer the advantage of relatively common usage in other clinics and a degree of normative information, but other word lists may be employed as long as one is aware of possible differences in scores obtained due to differences in word lists. Such word lists would have little inter-clinic value, but could be of considerable intra-clinic value in assessing aural (re)habilitation, considering amplification, relating auditory speech reception to visual speech reception, etc. Although not usually considered an audiometric measure, some visual speech reception measure should be obtained during this phase of the audiometric battery. Visual speech reception using isolated words is not the same as visual speech reception in the actual communication process, but it does provide an index of the relative contribution of audition and vision. Relating these measures to other measures of receptive communication provides an index of the individual's relative analytic and synthetic skills in visual speech reception. Although supra-threshold speech discrimination measures provide an index of how well the individual can understand speech, it should be remembered that monosyllable words offer a compromise between specificity and actual communication value (validity).

In the past the audiologist has reported speech discrimination results in terms of percentage correct, but additional information for planning analytic types of auditory training may be obtained by analyzing the erros. Closed message tests like the Rhyme-test (Fairbanks, 1958) or the Semi-diagnostic test (Hutton, *et al*, 1959) are designed for error analysis.

In contrast to specific stimulus recommendations for the previously discussed procedures, no particular stimulus words are being recommended since the various lists have different advantages and disadvantages. The important point is that some form of supra-threshold speech discrimination data be obtained and put to use in communication programming and that various procedures be explored and evaluated.

In addition to the above word lists, some of the speech discrimination tests designed for children should be considered (Goldman, *et al*, 1970; Haskins, 1949; Myatt and Landes, 1963; Prather, *et al*, 1971; Ross and Lerman, 1968; Siegenthaler and Haspiel, 1966). All of these tests use pointing rather than oral responses which offer a major advantage in testing many deaf individuals. Some of the tests offer greater word familiarity than the W-22 or Rhyme-test words. Two of these tests stress training the child to respond to the actual test words before testing, this offers an advantage in repeated use of a single set of words for retesting while most auditory discrimination tests attempt to use equivalent but different word lists for testing.

One additional aspect of supra-threshold speech discrimination testing should be mentioned. That is the level at which the stimuli are presented. The basic measure is the maximum discrimination score that can be obtained, frequently referred to as "PB max" when PB words are used. As indicated, various stimuli may be employed, as PB words are not sacrosanct. In this case, the measure should be referred to as the maximum discrimination score. Since different word lists may result in varying scores, the word list should be specified in reporting the test results. This measure should be obtained by exploring several levels of presentation and determining an articulation gain function. Some audiologists estimate the maximum discrimination score using only one level of presentation. Several such levels have been suggested, ranging from 30 to 50 dB SL. Such levels work fairly well for normal hearing and most hearing impaired individuals, but are totally inappropriate for most severely and profoundly hearing impaired (deaf) individuals. The maximum discrimination score for most deaf individuals is obtained at a much lower SL. The most comfortable level (MCL) and the MCL plus about 6 dB have been found very useful for estimating the deaf individual's maximum discrimination score. This frequently works out to be as little as 6 dB SL. In addition to obtaining the maximum discrimination score, it is frequently helpful to obtain discrimination scores at some set level such as "soft conversational speech" (established to be about 55 dB SPL or 33 dB HL), "average conversational speech" (established to be about 70 dB SPL or 48 dB HL) or the "loud conversational speech" (established to be about 85 dB SPL or 63 dB HL). Although there are limitations because of the very limited auditory sensitivity of many deaf individuals, such a measure as the discrimination at the average conversational speech level may still be particularily useful in considering amplification. In all speech discrimination testing, the level of presentation should be noted for future reference.

There are still many unanswered questions in the area of speech discrimination but that should not deter us from using the best procedures available and developing improved methods for obtaining such measures for the deaf.

The Most Comfortable and the Uncomfortable Levels should be determined using conversational (unemotional or "cold running") speech about the tasks monitored at ± 2 dB on the VU meter. A bracketing procedure has been found useful in determining the most comfortable level measures, while an ascending procedure is better for determining the uncomfortable level measure. These measures are basic to determining the dynamic range and tolerance of an individual. Such information is critical in considering the appropriate use of amplification. Such measures are also considered, along with other measures, to evaluate recruitment.

Continuous and Interrupted Bekesy Tracings should be obtained using either the sweep or fixed-frequency method. If the fixed-frequency method is used, at least one low frequency (250 or 500 Hz) and two higher frequencies (1000 -6000 Hz) should be tested if the puretone results indicate residual hearing at these frequency ranges. Bekesy audiometry is useful in determining the type of sensori-neural pathology. It can provide some index of "recruitment" and is extremely useful, relative to habituation and fatigue. Therefore, in addition to being a tool for determining types of pathology, Bekesy audiometry can provide information relative to the processing of acoustic signals—such as speech. Other differential diagnostic procedures, such as the median plane balance, SISI (Short Increment Sensitivity Index), and tone decay may be employed with the deaf, but for a basic test battery I would recommend Bekesy audiometry. In the future, Bekesy audiometry may even replace conventional puretone audiometry.

In summary, a basic audiometric battery has been proposed with an attempt to indicate what kinds of measures an audiologist can use with most deaf individuals within the limits of the state of the *art* and science. An attempt has also been made to indicate some of the communication programming implications of the proposed battery. As a *basic battery* additional tests will be indicated for many individuals. The basic battery has been used to imply a minimum set of procedures selected as possible to perform and practical in terms of providing usable information. The battery was also presented in the context of a more comprehensive audiologic assessment. The fact that most of the paper was concerned with audiometry was not intended to diminish the other aspects of an audiologic assessment. An assumption was made that most individuals at this meeting would be well versed on the other 5 components of the audiologic assessment and how audiometric findings must be interpreted in light of the other 5 components.

A few additional comments may be considered. The retesting of students on a systematic basis is strongly recommended. Annual testing of children under 10 or 12 with a less frequent schedule for older individuals is also recommended. Since auditory abilities may vary, retesting should be a part of the systematic revaluation of the communication programming for each individual.

In addition to the communication programming value of a basic audiometric battery, such an approach has considerable research implications.

In conclusion, it is hoped that this presentation will stimulate discussion and result in a reevaluation of audiometric practice with the deaf. Such discussion or reevaluation may shake us out of our tradition and convenience bound "ruts," but it should result in improved services for the deaf.

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AN AUTO-TUTORIAL APPROACH FOR EXPLORING THE SENSORY CAPABILITIES OF YOUNG, HEARING IMPAIRED CHILDREN

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It is the purpose of this discussion to attempt to outline a program for the pre-school hearing impaired child in which the educational audiologist works in conjunction with the teacher of the deaf to obtain basic information concerning the child's auditory sensory capabilities for his future educational program. Since the audiologist is frequently the first professional to see the hearing impaired child, it would be helpful if we attempted to define his role by listing those tasks for which the audiologist is responsible. We usually think of the audiologist's role as being four-fold: (1) to ascertain if the person has a hearing loss and, through appropriate audiological tests, to determine how much residual hearing he has, noting particularly the audiometric configuration; (2) to determine the site of lesion; (3) to ascertain to what extent the person uses speech as the major means of communication; and (4) to determine what can be done in the way of rehabilitation, i.e., what potential is there for understanding speech with or without amplification.

The literature contains a considerable amount of information relative to the various assessment procedures useful with young children. The primary function of these assessment procedures has been to attempt to answer the question: "How much residual hearing does the person have?" Observation of the young child's behavior as we present an array of acoustic stimuli and note appropriately the presence or absence of response has led us to be aware of the normal developmental response pattern of hearing children so that the audiologist is aware of what kinds of responses are likely to occur.

According to Shepherd (1971), the audiologist must perform three tasks when measuring the auditory system of the child: (1) he must have an accurate set of criteria so that he can define a response, (2) he must be able to select the appropriate test procedure so that he can obtain responses from children with an impaired auditory system, and (3) he must be able to differentiate normally hearing children from children with impaired hearing by setting appropriate response criteria.

While the audiologist makes a significant contribution by determining how much residual hearing the child has, the most important of the four tasks which the audiologist is responsible for is the assessment of how the child uses his residual hearing, not just how much residual hearing the child has. According to Carhart (1963), the basic reason for performing audiological assessments with educationally hearing impaired children is to determine what potential each child's sense of hearing holds for him as the medium through which he may learn language. Evaluations of the child's capacities to make correct auditory discriminations and determinations of his potential to increase this skill is the area where the audiologist can make a substantial contribution to deaf education. Accurate assessment of the child's auditory discrimination abilities can be helpful in planning future auditory training programs as well as yielding information concerning the child's educational future.

The Joint Committee on Audiology and Education of the Deaf (1965, p. 15) reported "a great need for audiologists to understand the educational problems of the deaf, since the audiologist usually sees a child before he is placed in a program for deaf children and frequently takes part in the decision on educational placement." Educators of the deaf responding to the question "What is the *ONE* most important contribution that an audiology program can make to an education of the deaf program?" made some enlightening comments that should be of concern to educational audiologists. First of all, the contribution listed most frequently was the use of audiological analyses in the educational placement and determination of the potential of the deaf child. Classroom teachers want a better understanding of the child's hearing potentials and limitations and a complete analysis of the hearing capacity of their pupils as related to their educational program.

Audiology as a profession is concerned with the process of hearing and, therefore, it seems proper that this profession should take the responsibility of exploring basic and complex auditory discrimination abilities of the (young) hearing impaired population. Educators of the deaf want something more than a piece of graph paper with red circles and blue X's. They want more than a decible definition of hearing loss, something more than information about the nature and extent of the hearing impairment. They want meaningful interpretations of the education implications of the audiological test results. Since audiograms may indeed change as the child learns to use his hearing, educational audiologists can be extremely helpful in stating the functional limits of the hearing loss. In addition, since audiograms represent only one aspect of auditory perception, i.e., the child's responses to pure tones, we, as audiologists, should attempt to explore the relationships between various degrees of hearing impairment and the child's responses to an array of acoustic stimuli.

It is proposed, therefore, that there is a need to explore basic sensory capabilities of young hearing impaired children so we may obtain meaningful diagnostic and prognostic information that can serve as insight into developing auditory training activities. It is further proposed that the exploration of the sensory capabilities can be achieved in an auto-tutorial approach employing operant conditioning procedures. The operant conditioning procedures would allow for the opportunity to understand the auditory behavior, auditory learning, and auditory capabilities by obtaining knowledge of the factors necessary to modify the behavior of the young acoustically handicapped child. It is our contention that a structured, auto-tutorial approach progressing from a visual discrimination task to an auditory-visual task, and finally to an auditory task would lead to a high degree of understanding of the sensory capabilities of children with hearing loss. If basic sensory performances produce data that are meaningful, it is expected that we can, in part, bridge the gap from the decibel definition of hearing loss as obtained from audiological test results to clinical anecdotes describing successful auditory training programs.

The results of various auditory training programs are largely anecdotal and seem to be a reflection of certain isolated clinical cases which, for some reason, are able to succeed in an auditory approach. Audiologists and educators of the deaf, however, are frequently dismayed because the clinical testimonials do not reveal the true auditory abilities of the deaf population insofar as offering suggestions for training.

It is felt that there are certain basic auditory abilities that one must have in order to develop effective oral language. These include more than detection or awareness thresholds of auditory stimuli but are concerned with auditory discriminations of duration, pitch, intensity and rhythm of complex acoustic signals. While much information is available concerning the auditory discrimination ability of normal hearing adults, little is known about the sensory capabilities of the young hearing population, not to mention the child with a hearing loss.

The importance of hearing in the deaf child still appears to be underestimated, even though there are many reports in the literature describing the use of residual hearing. Some of the reports which have emphasized the importance of training even small remnants of hearing include Goldstein's *Acoustic Method* (1939), Fry & Whetnall's *The Auditory Approach in the Training of the Deaf Child* (1954), Wedenberg's auditory training document (1951), and Pollack's *Acoupedic Method* (1970). All of these reports have presented successful educational approaches for the auditory training of the hearing impaired child.

The fundamental difference between the deaf and hearing child is that the latter learns speech spontaneously while the deaf child is in need of special assistance. However, the point in common for both the hearing and the hearing impaired child is that hearing has to be learned. The auditory training procedures for the hearing impaired generally include the presentations of pleasurable sound stimuli such as environmental sounds, music, and speech. Usually the children are encouraged to listen with their hearing aids in an unstructured play-type atmosphere. While there can be no doubt that the auditory environment is important in developing the child's residual hearing, it is felt that the hearing impaired child could be receiving specific kinds of structured listening tasks that would allow him to develop his auditory sensory capabilities in a meaningful fashion.

This program is not concerned with presenting an educational philosophy of auditory training. The intent of this program is to describe feasibility studies designed to explore certain basic sensory capabilities of the young hearing impaired child to determine his level of performance for complex acoustic stimuli. In other words, we would like to ask the question: Can the hearing impaired child be trained to make correct judgments in the discrimination of sounds with acoustic contrasts that would provide diagnostic and prognostic information for the educational program? In short, we are interested in applying psycho-acoustic research to the young hearing impaired population so that, hopefully, we will gain psycho-audiological information that will bridge the gap between hearing sensitivity and the child's use of his residual hearing.

In this proposed program the audiologist would function in two major roles. He would obtain complete audiologic profiles, as they are conventionally employed, on each child in the pre-school group. These data would be augmented consistently by obtaining responses from simple auditory perceptual tasks designed to test the signal properties assumed to underly the perception and/or acquisition of speech skills. Eventually, measures of the child's ability to distinguish changes in amplitude, fundamental frequency, and duration characteristics of signals having syllabic characteristics would be made.

In the early stages the young children were trained to serve as experimental subjects and so it was planned to coordinate basic discrimination activities into sense training activities in the classroom. Thus, the children understood such concepts as same-different, higher-lower, more-less, etc. so that they could make reliable responses. In order to train and test the children, the procedures were automated in an auto-tutorial fashion.

Language development is of particular concern to educators of the deaf and auditory communication is the medium through which we learn to handle the English language. Those of us who work with the hearing impaired are aware of the struggle with language development that occurs as a result of an impaired auditory system. When we work with the hearing impaired, it is essential that we thoroughly understand the use he makes of his residual hearing so that appropriate training and educational decisions can be made. Almost all deaf children tend to have some residual hearing, although it may be of small amount. Frisina (1965) reported that approximately 30-40 percent of children in deaf education programs can learn to understand a great deal from hearing with an appropriate amplification system. He proposed that an additional 40 percent could obtain sufficient benefit from hearing with amplification so that it would be useful with complemental visual cues.

As Frisina (1965, p. 643) pointed out, "in many instances the full potential of the auditory channel has not been exploited in the education of the deaf. Realizing less than optimum potential of residual hearing has resulted in part from limited application of knowledge concerning the auditory system in deaf children." Although we are aware of the importance of auditory training for the hearing impaired we have relatively little data available on the kinds of auditory discrimination judgments this population can make. Thus, it was considered important to develop an intensive auditory training program for the pre-school hearing impaired. The pre-school program was coordinated by the director of the Purdue University Hearing Clinic, Dr. David Goldstein, in the Department of Audiology and Speech Sciences. The deaf education class was taught by a certified teacher of the deaf who had considerable experience working with the pre-school population. In addition, an educational audiologist assisted the teacher of the deaf by supervising individual therapy and offering suggestions for the auditory training program. Of course, a viable parent participation program was developed to provide information and application to the formal deaf education program.

TABLE I.—EXAMPLE OF SEMESTER SCHEDULE FOR THE PRESCHOOL HEARING IMPAIRED AT PURDUE UNIVERSITY, DEPARTMENT OF AUDIOLOGY AND SPEECH SCIENCES

Time	Child	Parent	Clinician	Audiologist	Teacher	Method
9:00	Group auditory training.	Observation	Observation	Assisted	Instructor of activity.	
9:30	Individual therapy.	Observation and discussion.	Individual therapy.	Supervision	Discussion with parents, observe individual therapy.	Auto-tutorial.
10:00	Bathroom—cookies.	Discuss individual therapy with clinician.		Meet with clinician and parents.		Do.
10:15	Group speech and language.	Observation	Observation		Instructor	Do.
10:45	Sense training, reading readiness.		Teacher-aid		Instructor	Do.

Table I presents an outline of one division of the pre-school class for the hearing impaired. As seen in this table, the program was developed to coordinate effects of the teacher, audiologist, clinician, and parent. Each child attended classes daily from 9:00–11:30 a.m. The schedule was divided into auditory training, individual therapy, group speech and language, reading readiness and sense training. The auditory training activities conducted in the group setting were done with the intent of giving the parents specific auditory demands necessary for communication at home. The individual therapy auditory training activities were structured according to each child's level of functioning and the format was closely organized with sense training activities. The purpose of the individual auditory training activities was to assist in the development of speech and language. To meet this end, the children were guided to respond to complex speech stimuli and in an effort to develop correct discrimination abilities, the children received supplemental drill in the autotutorial approach. Each child was seen individually for a period of approximately fifteen minutes per day for this part of the program. The format of these activities was essentially a stimulus-response procedure involving immediate feedback. As suggested by Postelthwait (1965), in auto-tutorial programmed instruction activities, small specific steps considered important to the development of the discrimination process were constructed.

As mentioned earlier, the first part of the discrimination process was concerned with visual discrimination tasks of which there is a considerable amount of information available. Hively (1962) structured visual discrimination tasks in a progressive order of difficulty. He suggested that by structuring the progressive difficulty he could increase the efficiency of the children learning the matching task. Earlier, however, Shepard (1957) found that increasing trials of discrimination led to a reduction in performance that he attributed to poor motivation or boredom. Norcorss & Speker (1957) measured discrimination of pictures in three groups of pre-school children. When a new task involving the transfer of learning was involved, the group that had learned to attach distinct names to the pictures performed better than the other groups. The authors concluded that by using verbal labels for the stimuli they were able to improve the performance of the learning task.

The development of visual discrimination abilities is one of the major objectives in reading readiness. In programs for preschool hearing impaired we frequently find that visual sense training is included. Some common visual discrimination tasks, as suggested by Heilman (1961) include:

(1) Identifying similar common pictures.
(2) Discriminating common pictures that are different.
(3) Identifying similar geometric figures.
(4) Identifying geometric figures with finer discriminations.
(5) Finding identical elements at the beginning of words.
(6) Finding identical elements at the end of words.
(7) Identifying letters and small words.

Since neither auditory nor visual discrimination can be pushed beyond the normal maturational expectancies, we should attempt to sharpen the discrimination process through various experiences and considerable practice. By providing various amounts of practice we can soon realize the individual needs of the children. As a result of instrumentation and programmed instruction we can expose children to finer discriminations visually, audio-visually and auditorily and note their performance for diagnostic and prognostic purposes.

At Purdue University the program utilized to explore basic visual and auditory abilities consisted of a number of stages. The purpose of these tasks was to train subjects to make correct discriminations so that they could serve as experimental subjects. The various stages of visual discrimination are presented below:

Stage I: to teach that two visually presented pictures of common objects and animals were the same.

Stage II: to teach that two visually presented pictures of common objects and animals were different.

Stage III: to determine if the children could make correct discriminations of visually presented pictures when presented in random (same-different) order.

State IV: to determine if the children could make correct discriminations of visually presented geometric forms (circle-cross) presented in random order.

Stage V: to determine if the children could make correct discriminations of visually presented geometric forms in an automated, programmed-instruction, format utilizing a modular programming system.

In order to obtain information on the visual discrimination tasks outlined above, it was considered important to obtain data for normal hearing pre-school children when no verbal instructions were given. Four pre-school children served as subjects in the initial phase of this experimental program. Their ages ranged from three years one month to four years eight months with a mean age of three years six months. All subjects passed a hearing screening test administered at 20 dB (ANSI 1969) for the octave intervals 250–4000 Hz.

Each child was seen individually and was seated in front of a panel which contained two buttons for the child's motor responses. A clown's face was situated approximately four inches above the buttons. The clown served as the reinforcer because when a correct response was given for any pair of stimuli, the clown's eyes flashed. Each child was given one trial per day with each trial lasting approximately five minutes. The length of time between trials varied from one to five days.

TABLE II.—AGE AND NUMBER OF TRIALS PER STAGE FOR EACH SUBJECT

Subject	Age (years)	Number of trials per stage				
		I	II	III	IV	V
S1	3.2	2	1	4	1	1
S2	3.1	1	1	*8+	----------	----------
S3	4.8	1	1	4	1	1
S4	3.1	1	1	5	2	2
Mean	3.6	1.3	1.0	*5.3	1.3	1.3

*Subject did not complete stage.

Table II presents the subjects by age and the number of trials needed by each subject to complete the five stages.

Three of the four pre-school children were able to complete all five stages. The three children showed a general improvement in performance from trial to trial within each stage. These results are comparable to the progress noted by Harlow (1950) and Hively (1962). The child who failed to pass Stage III revealed a general decline in performance. Observation of his behavior suggested poor motivation or boredom as suggested by Shepard (1957).

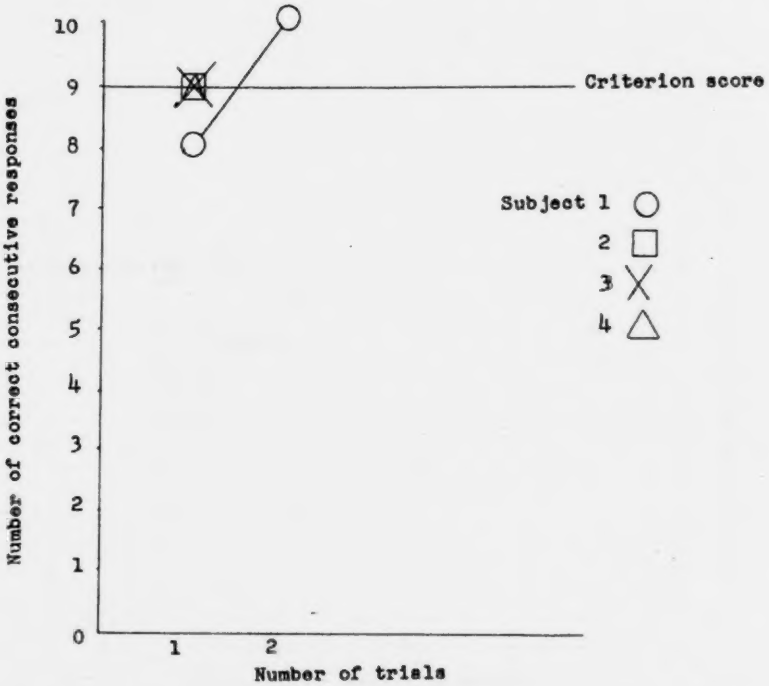

Figure 1.—*Number of correct consecutive responses and number of trials needed to obtain criterion score on visual discrimination task for stage I.*

The data for the four pre-school children are presented below according to the various stages. In Figure 1, Stage I, it can be seen that subject number one needed two trials before he was able to correctly identify nine of ten consecutive responses to common pictures of objects or animals that were the same. Subjects two, three, and four readily understood the task and were able to obtain the criterion score

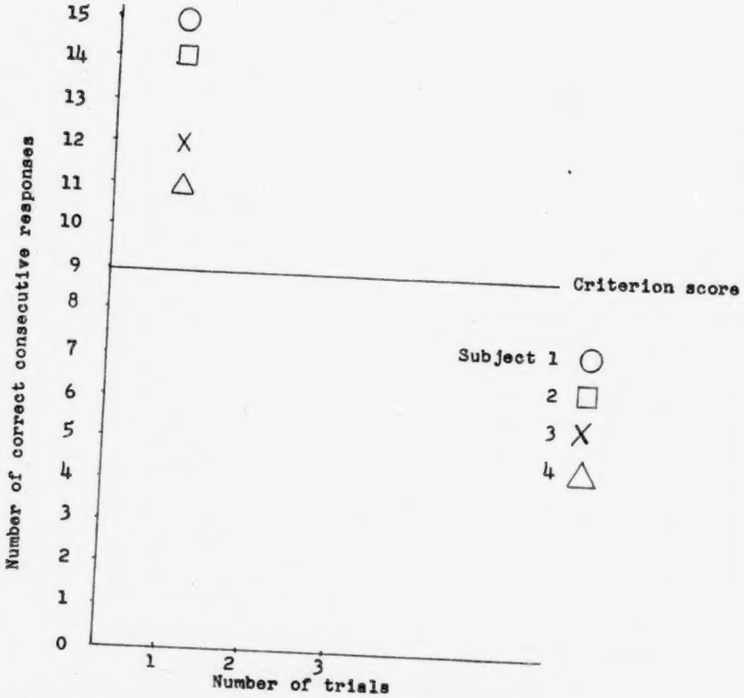

FIGURE 2.—*Number of correct consecutive responses and number of trials needed to obtain criterion score on visual discrimination task for stage II.*

on the first trial. In the second stage (Figure 2) the subjects were to identify that visually presented pictures of common objects and animals were different and all four of the subjects obtained the criterion score of nine consecutive correct responses on the first trial.

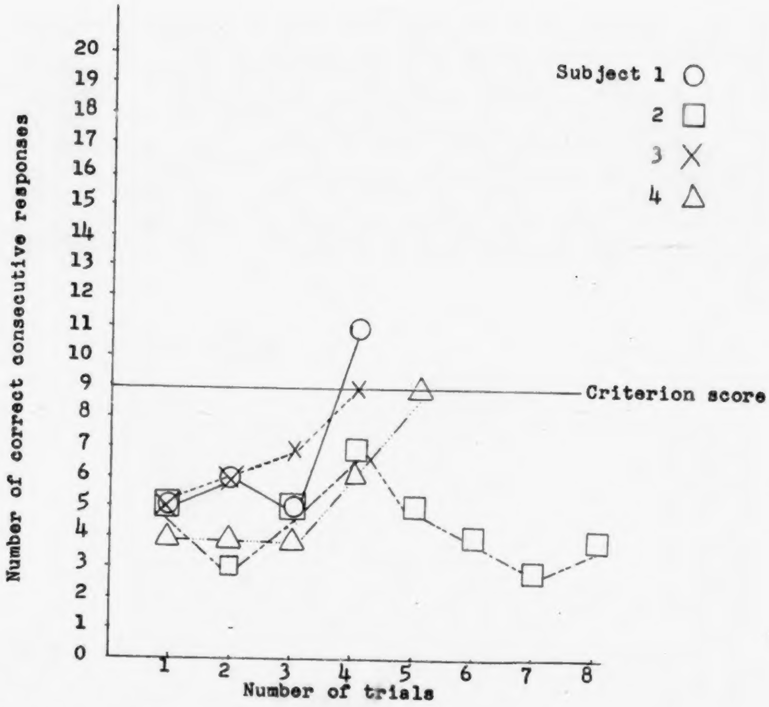

FIGURE 3.—*Number of correct consecutive responses and number of trials needed to obtain criterion score on visual discrimination task for stage III.*

Stage III (Figure 3) was somewhat more difficult for the preschool group than were Stages I and II. The mean number of trials needed to obtain the criterion score for Stage III was 5.3+. This was somewhat confounded in view of the finding that subject number two had eight trials in this stage and never successfully completed the task. Observation of his behavior suggested that he appeared to tire of the task, was not properly attending, and appeared generally bored. His pattern of response showed a gradual decline in performance from trial four to trial eight. The other three subjects were able to obtain the criterion score, but, in general, the random same-different presentation of pictures was more difficult than for the consistent presentations in Stages I and II. The mean score for those three subjects who were able to complete the task was 4.3 which was higher than the mean score of 1.3 for Stage I and 1.0 for Stage II.

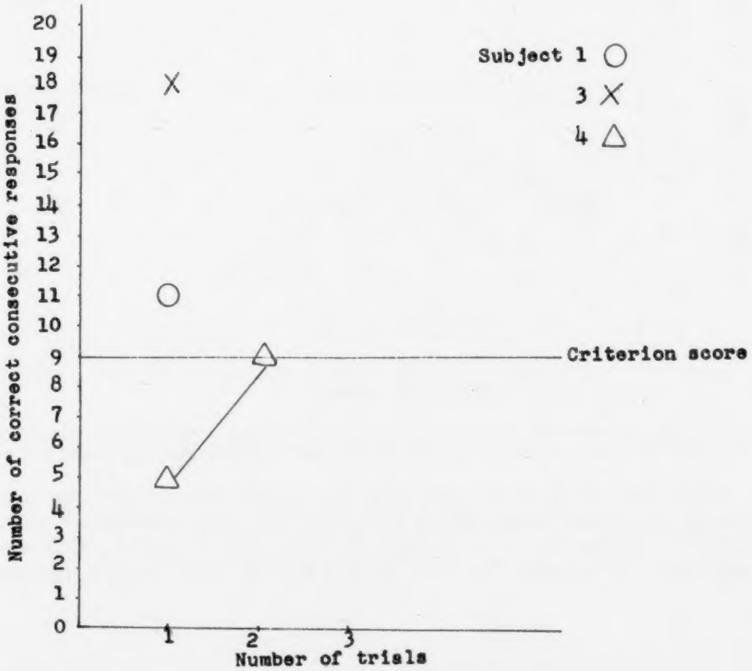

Figure 4.—*Number of correct consecutive responses and number of trials needed to obtain criterion score on visual discrimination task for stage IV.*

Figure 4 shows the results for the three subjects who completed Stage IV. Two of the three subjects were able to transfer the task from randomized common pictures to randomized geometric forms on the first trial. The other subject completed this task on the second trial. The mean number of trials needed to complete this task was 1.3. The results of the automated portion of this study are presented in Figure 5. The mean number of trials needed to complete this task was 1.3.

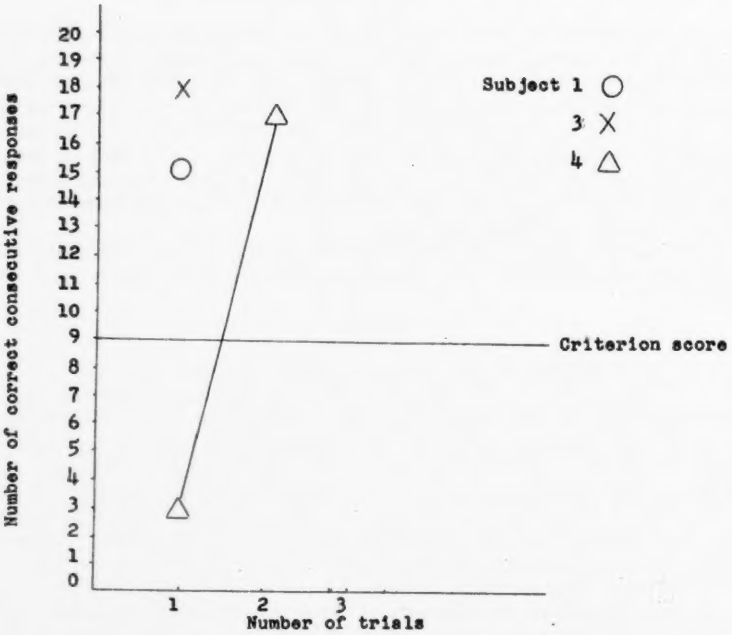

FIGURE 5.—*Number of correct consecutive responses and number of trials needed to obtain criterion score on visual discrimination task for stage V.*

Several implications for future research seem indicated from this feasibility study. First of all, the ability to complete the five stages did not appear to be related to age because both the youngest (3.1 years) and the oldest (4.8 years) completed them successfully. Obviously, there is a need to administer similar tasks to a greater number of subjects keeping the time between trials constant. Further research on the type of errors made and reinforcement contingencies seems necessary. It is important to determine the best means of modifying behavior through an operant conditioning procedure for both normal hearing and hearing impaired pre-school children.

In addition to the feasibility study employing visual discrimination tasks for normal hearing pre-school children, a feasibility study was conducted to determine the auditory discrimination ability for duration for a normal hearing and a hearing impaired child. Since the feasibility of using an operant conditioning task to measure the auditory abilities of hearing impaired children is not well documented in the literature, this study was conducted to obtain information concerning whether the children could be trained to serve as experimental subjects and to gain insight into the difficulties of the task.

The two subjects used in this study were five years of age, both male and of normal intelligence. The hearing impaired child has a severe bilateral sensori-neural hearing loss. The pure-tone average was 88 dB for the right ear and 83 dB for the left ear. The etiology of his hearing impairment was listed as maternal rubella. He wore body type hearing aids in a binaural arrangement and had an aided speech reception threshold of 40 dB. This youngster was enrolled in the pre-school program for the hearing impaired in the Purdue University Speech and Hearing Clinic.

The experimental task consisted of visual, auditory-visual, and auditory presentations and was separated into four stages as listed below:

STAGE I

Various geometric forms were presented in pairs (× - ○, △ - □, + - ——, ▭ - ▭). The stimuli were selected from the pairs listed above and the same-different presentations were randomized by a Grason-Stadler modular programming system. The subject's task was to view the paired stimuli and then vote as to whether the presentations were the same (○ - ○) or different (× - ○).

In the first stage the visual stimuli were presented simultaneously, i.e., both geometric forms remained visible until the subject made a correct judgment. After he voted correctly the stimuli would change and two new figures would appear. If the subject voted correctly he received immediate reinforcement and the correct response was recorded. If the initial response was incorrect, the two stimuli remained on until the child voted correctly.

STAGE II

This stage was essentially the same as Stage I in that the same geometric forms were used. However, the stimuli were presented in consecutive order rather than simultaneously. For example, in this stage the first stimulus would flash on for one second. After both stimuli had been presented, the subject was allowed to vote as to whether the stimuli were the same or different. If the subjects voted correctly, a new stimulus was presented; if incorrect, the previous pair was presented again.

STAGE III

In the third stage, auditory signals were paired with the visual signals. After the subjects had successfully completed the first two stages it was felt that they could discriminate a long-short (same-different) visual presentation in consecutive order. This task was included in the experimental design, in small steps, so that the children could be led to discrimination tasks involving duration.

The auditory portion of the auditory-visual task consisted of wide band white noise, set at a comfortable listening level, and produced by a noise generator (Grason-Stadler, Model 455C). The intensity and interval between the pairs of noise bursts was held constant.

The noise bursts were controlled in duration with the long burst being 1000 msec. and the short burst being 500 msec. In this stage, the short auditory signal (500 msec.) was paired with a short rectangle and the long auditory signal (1000 msec.) was paired with a long rectangle. The audio-visual stimuli were presented in a consecutive manner and the subjects responded as in Stages I and II.

STAGE IV

In the final stage, the visual cues were eliminated and the subjects were required to respond to the duration of the auditory signal alone. The subject's task was to judge whether the two stimuli were the same or different. The presentations involved a number of possibilities. The two signals could be paired so that they were the same, i.e., 1000 msec.–1000 msec.; or the two signals could be paired so that they were different, i.e., 1000 msec.–500 msec. In the different discrimination tasks, the short signal varied from 500 to 850 msec. and the long signal was held constant at 1000 msec.

TABLE III.—STAGE I RESULTS OF VISUAL DISCRIMINATION FOR SIMULTANEOUS PRESENTATIONS OF GEOMETRIC FORMS FOR NORMAL-HEARING AND HEARING-IMPAIRED SUBJECTS

Hearing-Impaired Subject

Trial	Stimulus	Number pairs presented	Number correct
1	X—○	20	20
2	X—○	20	20
3	X—○	20	20
4	△—□	20	20
5	△—□	20	20
6	△—□	20	20
7	——+	20	20
8	——+	20	20

Normal-Hearing Subject

Trial	Stimulus	Number pairs presented	Number correct
1	X—○	24	20
2	△—□	29	20
3	△—□	21	20
4	△—□	22	20
5	△—□	21	20
6	——+	20	20
7	——+	20	20

The results of the experimental task are shown in Tables III-VI. Stage I (Table III) results reveal the data for the visual discrimination of geometric forms presented simultaneously. The criterion score was 20 correct responses for each trial. The normal hearing subject completed seven trials and the hearing impaired child completed eight trials. The first few responses for trial one were directed and thereafter all responses were made by the subjects without assistance from the experimenter. The hearing impaired child completed all trials perfectly and the normal hearing child reached the criterion score well but needed a few more presentations to do this.

TABLE IV.—RESULTS OF VISUAL DISCRIMINATION FOR CONSECUTIVE PRESENTATIONS OF GEOMETRIC FORMS FOR NORMAL-HEARING AND HEARING-IMPAIRED SUBJECTS

Trial	Stimulus	Number pairs presented	Number correct
Hearing-Impaired Subject			
1	X—○	20	20
2	△—□	20	20
3	△—□	20	20
4	—+	20	20
5	□—□	33	30
6	□—□	30	30
Normal-Hearing Subject			
1	X—○	20	20
2	X—○	20	20
3	△—□	23	20
4	△—□	30	30
5	□—□	30	30
6	□—□	30	30

In Stage II (Table IV), the visual discrimination task consisted of consecutive presentations of geometric forms. In this stage the criterion score of correct responses was altered from 20 to 30 responses to make the task more difficult. There was no difficulty in transferring the task from simultaneous to consecutive presentations. Both subjects responded correctly to the four pairs of forms and demonstrated that they were ready to continue after six trials. The results for Stage III are shown in Table V. This stage involved auditory-visual discrimination for duration. The auditory portion of the signal was white noise and the visual portion consisted of a short or long rectangle. Both the normal hearing and the hearing impaired subjects were able to make correct discriminations of bursts of noise in the pairs 500–1000 msec. and 750–1000 msec. Table VI shows the results of auditory discrimination for duration. The results indicate that the hearing impaired child was able to recognize differences in duration in pairs of stimuli that differed by 150 msec.

TABLE V.—STAGE III RESULTS OF AUDITORY-VISUAL DISCRIMINATION FOR DURATION FOR NORMAL-HEARING AND HEARING-IMPAIRED SUBJECTS

Trial	Stimulus	Number pairs presented	Number correct
Hearing-Impaired Subject			
1	$\overset{\square}{500}$–1, $\overset{\square}{000}$ μsec	30	30
2	$\overset{\square}{750}$–1, $\overset{\square}{000}$ μsec	30	30
Normal-Hearing Subject			
1	$\overset{\square}{500}$–1, $\overset{\square}{000}$ μsec	34	30
2	$\overset{\square}{750}$–1, $\overset{\square}{000}$ μsec	34	30
3	$\overset{\square}{750}$–1, $\overset{\square}{000}$ μsec	30	30

TABLE VI.—STAGE IV RESULTS OF AUDITORY DISCRIMINATION FOR DURATION FOR NORMAL-HEARING AND HEARING-IMPAIRED SUBJECTS

Trial	Stimulus	Number pairs presented	Number correct
	Hearing-Impaired Subject		
1	500-1,000 μsec	33	30
2	750-1,000 μsec	30	30
3	750-1,000 μsec	30	30
4	850-1,000 μsec	30	30
5	850-1,000 μsec	30	30
6	850-1,000 μsec	30	30
	Normal-Hearing Subject		
1	750-1,000 μsec	34	30
2	750-1,000 μsec	37	30
3	750-1,000 μsec	41	30
4	750-1,000 μsec	35	30
5	750-1,000 μsec	34	30
6	750-1,000 μsec	35	30

The results from the present study are slightly better than those reported by McCroskey & Cory (1968) when they investigated auditory duration discrimination as related to age. Using normal hearing subjects, they had children between the ages of three and fifteen respond to durational changes for pure tones. They reported that children in the three year age level consistently failed the task and the durational discriminations for the five year old subjects was uniformly poor. They reported mean duration discrimination thresholds for pure tones where one of the pair was held constant at 110 msec., but the duration of the other was discretely variable from 110 msec. to 620 msec. McCroskey & Cory reported that discrimination for duration increased with age with six year old subjects obtaining a mean discrimination threshold of 333; nine year old subjects, 115 msec.; and twelve year old subjects, 67 msec.

The scores obtained by McCroskey and Cory (1968) cannot be compared directly with the scores obtained in the present study. They used duration tasks involving pure tones which were of relatively short duration (110–620 msec.). We used white noise that varied in duration from 500–1000 msec. which could have been an easier task. The point of interest is that the hearing impaired child was able to make correct discriminations for duration of two signals that varied by only 150 msec. Unfortunately, we do not have data on his auditory threshold for duration, but this information will be forthcoming.

There is some question concerning the selection of stimuli for tasks such as duration discrimination. McCroskey & Cory (1968) selected pure tones, we employed complex noise, and others may suggest the use of speech or speech-like materials. It is known that duration differences for vowels and consonants are somewhat variable. Duration for vowels is generally within the 200–300 msec. range. Training in duration discrimination may be helpful in assisting children to discriminate long vowels [i] from short vowels [I], or [u] from [U], etc. Simple auditory perceptual tasks designed to test the signal properties involved in speech perception, such as duration, intensity, fundamental frequency, formant transitions, etc., can be helpful in describing the functional limits of the child's hearing loss and thereby may bridge the gap between the decibel definition of hearing loss and the educational implications of audiological analyses.

It should be recalled that these experimental tasks were developed as feasibility studies. Generally, it is felt that operant conditioning techniques can be used to assess the sensory capabilities of hearing impaired children. Obviously, additional research is needed to demonstrate the various auditory capabilities of a large group of normal hearing and hearing impaired children.

Auditory discrimination ability for verbal materials presented to the normal hearing child increases with age (Templin, 1957). It usually takes a normal hearing child eight years to plateau in articulation and speech discrimination ability. It would seem that the auditory discrimination ability of an acoustically handicapped child would likewise increase with age. McCroskey & Cory (1968) showed this to be the case for normal hearing children using a non-verbal task of duration for pure tones. It would, therefore, seem important to determine the auditory capabilities for non-verbal discrimination tasks with the hearing impaired.

The information obtained from psychoacoustic experiments would be valuable for two reasons. First of all, it can be used to train children to develop their residual hearing in discrimination tasks considered important for speech perception. Specifically, experimental tasks concerned with discrimination of duration, intensity and frequency could be developed. The complex signals could be speech-like in terms of those features considered necessary for the understanding of speech. In addition, tasks involving auditory memory, auditory rhythm, and auditory sequencing should be presented to the hearing impaired. The second reason for selecting certain psychoacoustic experiments is that the results could assist in delineating certain areas of weakness where modifications in the training program could be made. It is possible that errors in various experiments could be reflected in other areas of performance and, therefore, could be of vital concern to educators of the deaf in their educational programming for the hearing impaired.

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A LINGUISTIC APPROACH TO THE TEACHING OF SPEECHREADING: THEORETICAL AND PRACTICAL CONCEPTS

Raymond H. Hull, Ph. D., Director, Audiological Services, Assistant Professor of Special Education and Rehabilitation, University of Northern Colorado

I. The Concept

Since the time of the formal introduction of speechreading into this country, those of us concerned with aural rehabilitation have been struggling with the question of the validity of our position as teachers of speechreading. Have we been teaching what we have intended? More importantly, have we taught anything through the strict traditional methods of speechreading instruction?

The age-old discussions of analytic vs. synthetic approaches have given us little with which to work in our attempts to improve our teaching methods. Our traditional approaches of phoneme, word and sentence analysis have more than often proven fruitless. Those enrolled in speechreading classes usually complete the course as poor or as good speechreaders as when they began. We, in the area of aural rehabilitation have continually admitted that we are frustrated, frustrated because we have reached a stalemate in our attempts to teach this thing we call speechreading. It seems that many of us are content to live with this frustration, without attempting to break out of our restricted modes of thinking and to attempt entirely fresh approaches.

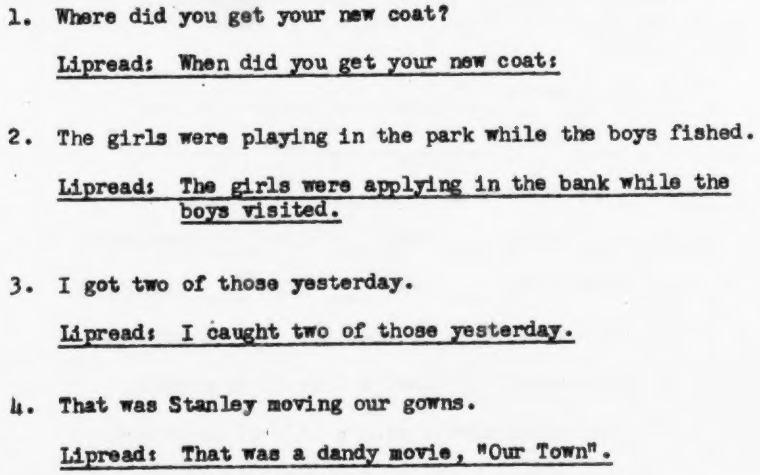
As you all know, countless studies have been conducted relative to such aspects of speechreading as the visual recognition of vowels and consonants, words and phrases. What have we generally learned from these studies? I think that most of you will admit that we have learned to cope with the frustration that speechreading, visually only, is very difficult for both the instructor and for the client. We have realized for sometime that we need something different, something more effective than the teaching of visually oriented phoneme, word and sentence analysis. Those of us at the University of Denver decided to take a different approach to the teaching of speechreading. We felt that we needed to take a good close look at speechreading and try to filter out some of the elements of our verbal speech and language and attempt to discover a more effective technique for acquainting our speechreading clients with the essence of this thing we call "speech and language *understanding*," not only visually, but also auditorially through the use of what residual hearing they possessed. The concept of "speech understanding" did not include the visual recognition of individual phonemes except for brief instruction relative to homophonous sounds or sounds that might be otherwise confusing visually. It further did not include the visual recognition of individual words and phrases or sentences out of context, that is out of the speech or environmental context. By environmental context, I mean the fact that a one sentence statement could be *in* environmental context, i.e., a greeting such as "How are you this morning." The present LINGUISTIC APPROACH dealt with the concept that if we expect to aid the hearing impaired person in becoming more proficient communicatively through the utilization of residual hearing and supplemental visual cues, we need to train him to "fill in the gaps" between what he perceives in communication and what he is missing. It emphasized the fact that in most communication situations, the normally hearing individual does not listen to every individual phoneme when he perceives auditory-verbal information, nor does he often perceive every word in every conversation. We "listen" for the *thought* of what is being said, as we listen for cues that give us information about the verbal message. Why could this not be the case in the reception of *visual*-auditory-verbal information? To achieve this, instruction dealing with the *structure* and patterns of language, along with the *syntactic and morphologic* aspects of our oral speech and language was emphasized. Stress relative to the total structural properties of oral communication was found an effective tool in speechreading instruction. The *predictability* of the patterns of our oral speech and language in terms of intelligibility was stressed. This total linguistic approach had as its purpose instruction regarding the above predictable properties of speech, and hopefully the development of an ability on the part of the speechreading client to "piece together" the *thought* of the speaker without receiving every word. All possible residual hearing within each client was used along with supplemental visual cues.

II. THE METHOD EMPLOYED (PRACTICAL APPLICATION)

The following are examples of materials utilized in the Linguistic Approach.

A. Right and wrong information

This activity was used to first of all make clients aware that there are words within sentences that look like others and can change the meaning of sentences. Figure 1 illustrates the type of sentences utilized. Clients were given a typed list of sentences. They were asked to determine if the sentences they "saw" the instructor say were the same or different than was written. If the sentence was different, it was then their task to attempt to figure out how it was different.



1. Where did you get your new coat?

   Lipread: When did you get your new coat:

2. The girls were playing in the park while the boys fished.

   Lipread: The girls were applying in the bank while the boys visited.

3. I got two of those yesterday.

   Lipread: I caught two of those yesterday.

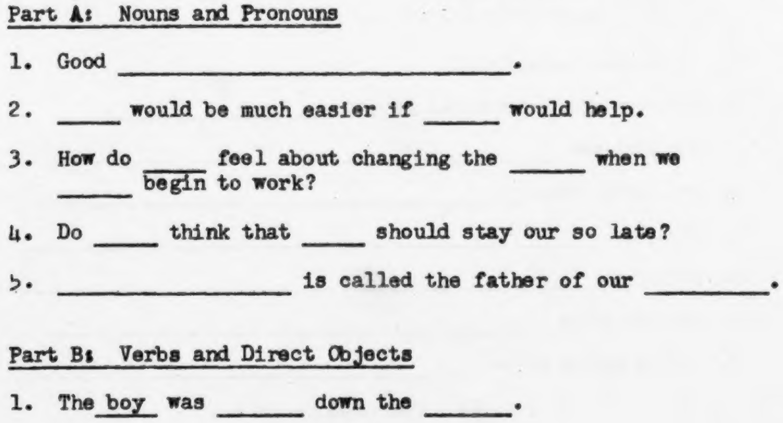
4. That was Stanley moving our gowns.

   Lipread: That was a dandy movie, "Our Town".

FIGURE 1.—*Right and wrong information.*

B. Filling in the gaps

Figure 2 presents an example of this exercise. Its purpose was to make clients aware that with a little information, it is possible to develop the capacity to guess the content of messages.



Part A: Nouns and Pronouns

1. Good ________________.
2. _____ would be much easier if ______ would help.
3. How do _____ feel about changing the ______ when we ______ begin to work?
4. Do _____ think that _____ should stay our so late?
5. ______________ is called the father of our _________.

Part B: Verbs and Direct Objects

1. The boy was ______ down the ______.

FIGURE 2.—*Fill in the gaps.*

C. The structure of our language

This activity illustrated if Figure 3 was utilized both as a method of assessment and as lesson content. Its purpose was to instruct clients regarding important syntactic cues in language that facilitate speech perception when not all of the auditory signal can be heard. This aspect included specific instruction concerning the syntax and morphologic patterns of our language in relation to its predictability and redundancy.

1. ____ money ____ ____ ____ ____ ____ ____.
2. ____ money ____ ____ ____ life ____ ____.
3. ____ money ____ ____ ____ life ____ happiness.
4. ____ money ____ mean ____ life ____ happiness.
5. Does money ____ mean ____ life ____ happiness.
6. Does money ____ mean a life ____ happiness.
7. Does money ____ mean a life of happiness.
8. Does money always mean a life of happiness.

FIGURE 3.—*The structure of our language.*

D. The predictability of our speech and language

This exercise was utilized to make clients aware that *information* in conversations can be predicted. The items in Figure 4 present practice items for this aspect of the Linguistic Approach. Included are exercises concerning:

(a) How would you say it?
(b) How would your listener say it?

1. It was such a beautiful ____________.
2. She wore such a beautiful gown to ____ ____________.
3. The girl was ____________________________.
4. The little baby ____________________________.
5. The snow ____________________________.
6. Skiing is ____________________________.
7. The sun shone ____________________________.
8. That building was so ____________________________.

FIGURE 4.—*How would you say it?*

E. The use of the above in various communication environments

1. In various noise backgrounds.
2. In the outside world:
    - (a) Restaurants.
    - (b) Filling station.
    - (c) At the dinner table (babble noise).
    - (d) While others are watching TV—taped programs—competing messages.
    - (e) With and without gesture—part of the total visual communication process.
    - (f) While speaking to males, females and children (some complain about children's or females' voices).
    - (g) In social environments—yard parties, dances, etc.

III. THE LINGUISTIC APPROACH

The Linguistic Approach appears to be an effective approach to the teaching of speechreading. Its effectiveness in helping the hearing handicapped individual to improve or retain his ability to receive and interpret verbal communication when he cannot hear all auditory information, has been clinically demonstrated.

AN INFANT DEVELOPMENTAL LANGUAGE PROGRAM

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The acquisition of language is unique in human beings. Intellectual development and educational attainment are dependent upon this acquisition. Much of our time, as professionals in the area of deafness, has been dedicated to the discovery of better ways to facilitate language development for the profoundly and prelingually deaf child. Remaining at the forefront of controversy is the bitter debate between the proponents of manual and oral communication.

My purpose here today is to suggest that the symbol set or mode of communication used for the school-age child is of little consequence, compared to the language facility the deaf child possesses when he enters the school environment.

Three critical years for the acquisition of language exist before preschool age is reached—years that are the most important for planning of brain mechanism and processing the input efficiently (*1*), years that are critical periods for developing conceptual language (*2*). The deaf child who has been given a complete form of language in infancy will enter the formal school environment equipped, as the normal child is, with a complete language set which can be translated into any other chosen symbol set—auditory, oral, written or visual.

I suggest that we as professionals, devote our efforts to the establishment of parent-centered infant developmental language programs which can equip deaf infants and preschool children wth a *complete* form of language.

Let us then examine the avenues through which the deaf infant can receive complete language input and the environment best suited to this endeavor.

AUDITORY-VERBAL INPUT

The "normal" way to learn language is of course through the auditory pathway. This may be considered the ideal route to language development for those infants possessing sufficient residual hearing and intact auditory processing. The crucial determination of "sufficient residual hearing", however, is only a subjective judgment today; this being a most worthy topic of investigation. Marion Downs (*3*), noted pediatric audiologist, suggests that when definite responses can be obtained at all frequencies through 2000 Hz., even if as low as 100 dB., the criterion of sufficient hearing is met.

A program of educational audiology emphasizing the development of the auditory function, is described in detail by Doreen Pollack (*4*).

VISUAL-VERBAL INPUT

Lip reading is not considered a primary language input, as language concepts cannot be learned through lip reading alone; however, it is often considered as a supplement to auditory input. It would seem that a nearly same criterion of sufficient hearing, as for auditory verbal input, be met in order to consider this input system.

MANUAL INPUT

Two forms of manual input are standard communication modes today—the American Sign Language and Fingerspelling. It is a well established fact that fingerspelling cannot supply language input for the child in infancy (*3*, *5*, *6*). The American Sign Language has received heavy criticisms, i.e. (1) its structure is not the same as English which makes learning English more difficult, (2) it is an inferior form of communication and not a language, therefore degrading the deaf child's capacity to learn complex language, and (3) instruction in sign language would take up valuable learning time that could be devoted to learning English (*5*).

Although there is little evidence to support these criticisms, the limitations of American Sign Language have reduced its value as a *complete* language input for the young deaf child.

New forms of signing are being developed, however, which are grammatical and syntactical representations of English. These are expansions of the American Sign Language where there is a sign for each word and only one word for each sign. There are prefixes and suffixes, verb conjugations, plurals, comparison of adjectives, and signs for the articles. One such system of expanded sign is called, Seeing Essential English (SEE) (*7*).

Marion Downs states, "We are recommending this type of *complete language signing* for the profoundly deaf infant, birth to three years old, in combination with all other sensory inputs, auditory and visual, that can be given. . . . At the age of three the child will then be ready for an educational program that is in tune with his primary abilities, whether it be auditory, visual-auditory, or manual. The language concepts that have been developed through complete language signing will allow the child to be more proficient in any program."

Disapproval of the new sign system of English has been voiced by some of the adult deaf population and professionals in schools for the deaf where fingerspelling and American Sign Language are used. It should not matter, however, if the sign system we give the infant deviates from the adult or school sign system. So long as the infant system is a complete language form, the translation can be made into the school or adult sign system as well as the written or oral form of English. Remember, the normal hearing child translates his auditory-verbal symbol set quite easily into the written symbol set when he reaches school age.

We at the University of Denver Speech and Hearing Center, have developed a parent-centered infant developmental language program in which two different modes of complete language input are used—the Auditory-Verbal Approach and the Total Approach which includes the Seeing Essential English system of signs. This past year has been an exciting planning and organizational year where we are observing the acquisition of complete language in many of our infants. In September, we will initiate a formal two-year longitudinal study of our techniques and accomplishments (which, hopefully, may be a significant contributing paper to this convention in 1974).

The need for parent-centered training programs for deaf infants is certainly not new; it has been recognized for at least twenty-five years. The Ewings (*8*), in 1947, suggested a home training program under the guidance of a clinician or teacher of the deaf. There have been publications, correspondence courses, schools and clinics dedicated to parent centered training of preschool children. Unfortunately, many of these programs have been program-centered—watered down classroom techniques—which contributed little to the normal process of language development in infancy.

A deaf infant, as a hearing infant, is going to learn language in a deeply emotional one-to-one relationship with his mother. His most meaningful language learning experiences will be found within the daily routine of the home. Thus, the parent centered training program Must Be Individualized for each mother and child.

The environment for the facilitation of such a parent centered program is of little importance. It may be a demonstration home, a clinic, a school, the parent's home, or the church basement . . . so long as the clinician has a good knowledge of the child, his mother, the daily routine and materials available at home (which can easily be determined by diarys kept by mother, mother's listings of toys and objects, or even a home visit).

Of primary importance is that Every Deaf Child Should Be Given the Opportunity To Develop Complete Language as an Infant in some type of parent-centered training program. Only then, will the schools have the opportunity to educate deaf children to the same academic and reading achievement levels as normal hearing children.

Administrators of schools for the deaf often give lip service to such a need, but often their schools sponsor no more than a three-day or one-week workshop each year for parents of infants and preschool children—a workshop primarily designed to acquaint the parents with the school and its philosophy of education.

It's time they began arranging intensive programs for these parents and children, training each family to provide meaningful experiences and complete language input in their home environment. If clinicians cannot be provided to give continued weekly guidance to these families, then a follow-up program of home visits or correspondence needs to be provided. Families living in rural areas of the states, desperately need a professional person with whom they might correspond during those early years. Providing a Wide Area Telephone Service line, so that parents may call the professional at any time free of charge and free to discuss at length, any current problems or progress, would be an ideal follow-up procedure.

Our higher educational institutions today are turning out a large number of certified audiologists and teachers of the deaf; but how many of these professionals are receiving extensive training or experience in the habilitation of deaf infants? How many clinics that provide audiological diagnostic services today, also provide a habilitation program? It's time we begin meeting these needs!

The infant developmental language program at the University of Denver Speech and Hearing Center is designed to serve as a guide to parents. The program is a series of suggestions and demonstrations to serve as starting points in complete language and auditory stimulation.

There are three requisites to entering our program: (1) the child must have been evaluated as to medical diagnosis of the pathology from which can be drawn a prognosis for the degree of auditory function that can be expected from the child, (2) the child must have a complete audiological work-up, and (3) the child must have been fitted with a hearing aid. The only exception to the third requisite is when absolute medical findings, such as with polytomography, indicate there is *no* functional hearing.

We then, ideally, see parents and their infants twice a week, both in their homes and at our clinic. An in-depth program of parent education is begun to provide them with the information they must have before they participate meaningfully in the language stimulation program. Discussions may include: normal and abnormal hearing mechanism, child development, normal speech and language development, the psychological, social and educational effects of hearing impairment, and the current status of deaf education with its varying philosophies.

The demonstration program is then divided into four areas, although they are integrated.

Appropriate Learning Experiences are suggested according to the child's age and development.

Auditory Stimulation suggestions are emphasized for all children, assuming that the child will wear his hearing aid during all waking hours.

Speech Play suggestions are made to encourage the child's vocalizations and speech refinement.

Normal Speech and Language Behavior Expectations are listed at each age level in order to give the parents a point of reference.

A fifth area is incorporated for those infants who need the facilitation of a sign system, demonstrating the use of complete language (naturally flowing oral language and complete signs) in all experiences. The parents of these children are enrolled in an intensive *Seeing Essential English* sign class so that they may quickly develop the fluency with sign to accompany the natural flow of oral language.

The parent accompanies the child in all demonstration sessions and is encouraged to participate. Participation quickly extends to holding the primary responsibility for auditory and language stimulation. The clinician is then available for constant reinforcement.

Our program is in the process of development and investigation. A written description of the program is near completion so that it may aid other clinicians in developing of similar programs. We are also developing a complete correspondence program to assist those families in rural areas.

Our program is small, but we hope to make a significant contribution to the process of educating the deaf child to his fullest capacity.

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Teacher Preparation—ASB Auditorium

9:00 a.m.–2:30 p.m.: *Chairman:* Marlyn O'Neill, Director, Teacher Preparation, Education of the Deaf, University of Illinois, Urbana.

9:00 a.m.–11:45 p.m.: "*Preparing Supervisors for Programs for Deaf Children,*" F. Eugene Thomure, Associate Professor of Special Education, Memphis State University, Memphis, Tenn.; "*Reflections on Twenty Years of Preparation of Teachers of Deaf Children,*" Sophia L. French, Coordinator, Teacher Preparation Deafness, Eastern Michigan University, Ypsilanti, Mich; "*Recent Research on Professional Skills and Personal Characteristics of Student Teachers of the Deaf,*" D. J. Power, Doctoral Candidate, Department of Special Education, University of Illinois, Urbana; "*The Specialization of Educational Audiology,*" Thomas C. Clark, assistant professor, Department of Communicative Disorders, Utah State University.

1:30 p.m.–2:30 p.m.: Open discussion on current issues in teacher preparation.

REFLECTIONS ON TWENTY YEARS OF PREPARATION OF TEACHERS OF DEAF CHILDREN

Sophia L. French, M.A., Eastern Michigan University

The act of reflection, according to the Oxford University Dictionary, is the process of turning back and fixing the thoughts on some subject with serious consideration. If one undertakes this activity in the area of teacher preparation one becomes immersed in a kaleidoscope of experiences, pressures and changes that occurred at an almost hysterical pace. Factual historical research into these is, of course, possible, but the task would be enormous and the results fill several volumes. Nor would such an effort necessarily clearly picture the adaptations those involved in teacher education have attempted to make. We shall, therefore, present only a rather personalized view of some of that which has transpired over the past two decades.

If one became first involved in teacher education when the United States was emerging from World War II, one undertook the task with more confidence than was possible during the two decades that followed. At that time most training programs were largely practical in nature. The would-be teacher passed through a year or two of in-service or apprentice-type experience. Related courses were taught by master teachers in speech, lip-reading, auditory training and school subjects. Bibliographies to be read were small. Research had produced only a few well-known studies. The bulk of knowledge to be absorbed did not appear to be overwhelming. The major emphasis was on the transmission of old and tried techniques. We worked in a rather sheltered world largely cut off from related professional activities.

Most training programs were based on the assumption that the average deaf child entered school somewhere around the age of five and would remain in that system throughout his school years. A few emphasized the importance of nursery school training. It mattered little whether the program consisted of day classes in a public school, a segregated day school or a residential facility. Most children could be expected to progress through a prescribed curriculum. Consistency existed. A job for the deaf graduate could be found. It was believed that most deaf adults had achieved a relatively good standard of living and that their social needs were well met by the many clubs and organizations serving them. The teacher-in-training merely had to learn the curriculum, master the techniques and she could expect to be successful. Persons involved in teacher training felt relatively confident in undertaking the tasks necessary for training this teacher.

The events of the fifties, however, soon drastically undermined this confidence. All the impacts that were bombarding the schools with accelerating force were simultaneously felt at the teacher-training level. The first of these was the population explosion and an accompanying change in the nature of the children appearing in the classroom. Not only were there more children than before but many more possessed multiple handicaps. New population mobility resulted in a constantly changing school population. Teachers could no longer count on having a homogenous group who were all at a specific stage of a specific outline. There was pressure to produce a person who was more flexible and could handle more levels.

The second great impact came from the information boom. Our isolation was broken as new knowledge and technology appeared that must be mastered and included in the training program. Audiology was perhaps the first felt as it forced us to take a new look at our concept of auditory training. The word "deaf" had to be re-defined in terms of what new hearing aids and amplification could do for our children. Teachers-in-training and those teaching them now had a great deal of new information to master concerning both group and individual aids. To keep themselves current they had to review the literature annually. They had to learn how to make minor repairs and keep the aids functioning. They had to become skillful in adapting teaching methods to make maximum use of residual hearing. They had to learn what hearing aids could and could not do. The audiogram assumed new significance. It had to be studied and understood.

Other disciplines were simultaneously expanding with rapidity and were affecting the task of the teacher educator. Daily the mails delivered new information concerning curriculum changes in regular schools that affected our courses. New research into child development and language acquisition made it clear that the first few years are critical for language learning. We could no longer assume that our task was primarily limited to producing teachers to work with children who were five or older. The "under-threes" began to be seen as an extremely important group. Parent counseling and parent education became part of the training curriculum.

The study of linguistics also drew attention. Were our language courses adequate? How much of this information should we include in our program? It is true that this new science in part reinforced our self-confidence for it frequently made reference to the fact that teachers of the deaf were almost avant-garde in their understanding of the requisites of language teaching. But at the same time it made us aware that at times we were not using appropriate teaching techniques, that we perhaps fragmented too much, that we were failing to follow some very important developmental guidelines.

New findings appearing from speech science and experimental phonetics similarly forced us to question some of our practices in teaching speech. Simultaneously they provided us with another inundation of material. Work in related areas such as brain injury, mental retardation, learning disabilities and environmental deprivation were producing equally much of real importance. Sociology, psychology, and psychiatry were becoming interested in the hearing impaired. We were swamped by information and appalled by the task of trying to fit it into our courses.

Meanwhile, demographic studies and reports from workers in job placement and vocational rehabilitation were adding to our unease. We had perhaps been over-optimistic in our assumptions about the social and economic adjustment of the adult deaf. The changing technology of our times was having a serious affect on employment. Graduating deaf students were not well-prepared. We felt pressure on another front. We must prepare persons who could work more effectively on the secondary and adult level.

By this time teacher educators were well aware that they were in an impossible bind. There was not only the demand to produce more teachers, but a clear need to educate more who could function at increasingly varying age levels with pupils of increasingly different backgrounds and needs. The task of keeping up with new information was almost impossible. The incorporation of all this new information into currently prescribed curricula was equally difficult. Added to those stressful situations was the fact that more and more teacher training was moving away from schools into the universities. Universities traditionally emphasized academic learning over practical experience. We were fearful of a real deterioration of quality as theory was increasingly separated from practice and as we were forced to spread ourselves extremely thin. The dilemma was great.

In the mid-fifties the crisis nature of this situation, along with the pressing problems in the schools and classes for the deaf, caused all concerned to unite in concerted pressure on the Federal government. School administrators, teachers, teacher-educators, parents and deaf adults themselves wrote letters, testified and appealed for assistance in meeting the great teacher shortage and upgrading the level of teacher preparation. They were successful and in 1958 Public Law 87–276 was enacted, setting up the scholarship program that spurred universities to become more interested in our plight and made thousands of scholarships for teacher education available.

This legislation was welcomed with joy. No longer would we be a spurned area of education. We had money to spend. We could attract students. We could expand our staffs. We would at last be listened to. However in many instances our joy was short lived. Although some problems were met, others developed. In the beginning there was a severe shortage of personnel to direct and take part in the proposed teacher education programs. The location of teacher education in university departments resulted in an over-emphasis on the Ph. D. as opposed to the teacher with long years of experience. Some persons with no teaching experience themselves were teaching others to teach. Because university administrators had little experience in this field, they often misunderstood many of the requisites of good teacher preparation in our particular area. They assumed that a few academic hours added to a general education curriculum was adequate. They saw no great need for pre-practicum, intensive speech training, or in-depth student teaching. Because of a lack of understanding of the specialities involved, they often assumed that a staff of one person was adequate for maintaining a teacher preparation program in this area. In some cases it was only when a university failed to qualify for a grant that progress could be made. We owe a great debt to those dedicated few who read innumerable grant applications, made site visit after site visit, gave freely of their time and advice, and helped to stabilize this program that now supports teacher training throughout the United States.

Shortly after the initiation of this act, other federal action took place that was designed to raise the level of teacher education in the area of the hearing impaired. Among the most important of these was the establishment of The Virginia Beach Conference on The Preparation of Teachers of Deaf Children in 1964. This conference, sponsored by The United States Office of Education, was specifically charged with the responsibility of setting guidelines for universities to follow. The resultant report made recommendations concerning selection of students, curriculum and practicum. It was here that the need for specialization within the broad area of the education of the deaf was clearly spelled out. The teacher of the deaf could not be all persons to everyone. In-depth training in specific areas was called for: the nursery level, elementary, secondary, vocational and college. It was here also that CED was called upon to serve as our professional certifying body.

Virginia Beach was soon followed by a sequence of other equally productive conferences. In 1964 the first Conference on Audiology and Education of the Deaf was held in Tucson. Thereafter a sequence of regional small conferences took place, all primarily reinforcing the recommendations of Virginia Beach, while also bringing the fields of audiology and education of the deaf closer together. The Colorado Springs Conference on The Education of the Deaf in 1967 resulted in the report *Education of the Deaf, The Challenge and The Charge.* This publication contains the recommendations of the Conference for the nation and its several states. We hope that it is in the hands of every director of education for the hearing impaired. It was the product of the leaders of deaf education in the United States at the time.

Federal funds, directly or indirectly, were also stimulating the development of new training programs in areas where they did not exist previously through a series of program development grants. Summer institutes have been and still are being carried out bringing a new era of continuing in-service education for teacher and teacher-educator alike. Captioned Films was established, which in turn sired Project LIFE and the resultant distribution of teaching materials and equipment. Four Regional Educational Media Centers have been set up, again serving both teachers and teacher-educators. The progress has been great and the task of keeping abreast exhausting. The times were indeed exciting.

Activity was not, however, limited to those stimulated by Federal funds. Our professional organizations were working on their own to raise and equalize standards for teacher certification. In 1966 The Council For Exceptional Children published Professional Standards for Personnel in the Education of Exceptional Children. Their recommendations covered the hearing-impaired child and were very similar to those of Virginia Beach. The Council on Education of the Deaf, CED, responded to the charge of Virginia Beach and assumed a professional certifying role. It has already given us much leverage for persuading universities to expand programs. More is in store, however, for on May 12 of this year a copy of the new, proposed standards for the certification of teachers of the hearing impaired was mailed to most of us. These standards, approved in principle by the Executive Board of CED and currently awaiting approval by member associations, may go a long way in solving many of our difficulties. They specifically recommend different levels of certification and specify specialization. Adherence to these will require considerable adaptation of existing practices by many institutions and we will have to work hard for acceptance by both state boards of education and universities. However they set down and clearly define guidelines that are both needed and viable. They should be of great assistance to us all.

Where are we today? It is difficult to assess. The teacher educator is still overburdened and there remains a lack of people competent to perform this role, albeit the shortage is less acute. Many problems are still with us. The very availability of Federal grants produces a few of these. Grant applications must be written and they take much time. Some of the administrative and bookkeeping roles we have had to assume almost overshadow the role we wish to play as teacher-educators. Very recently a new impact has been felt. Our universities have produced a surplus of public school teachers. Many of these are now knocking on our doors for they have heard that there are still job opportunities in the area of hearing impaired. Some institutions can limit enrollment . . . other state-supported universities cannot. There will be a severe screening problem. There is concern that the quality of training may be affected by this increase in numbers.

On the other hand, it is possible that in this turn of events lie some solutions to some of our problems. Should it be that we are beginning to meet the demand for numbers of teachers, we should be able to more rapidly facilitate the proposals made at Virginia Beach and reiterated in the CED proposed standards. We could at last lengthen duration of training, require the much needed specialization, give adequate time to both theoretical knowledge and practicum. Both training centers and hiring officials could be more selective. The general level of teaching could be considerably raised. Some of these things are already happening.

There are at present, according to the April 1971 Annals, 53 approved centers training well over 700 teachers of the deaf. Some specialized training programs are already in existence. On this program we shall hear about one concerned with training supervisors, another concerned with the training of teachers of the hard-of-hearing. The development of educational media, particularly expanded use of television, cartridge audio tapes and single-concept films, has vitalized our teaching. Universities and public schools housing day programs for the hearing impaired are better informed. The general public also, as the result of excellent television and publicity work, has been made aware of and become more interested in the deaf. Prejudice and ignorance, though still with us, are on the decline. Recruitment is no longer a problem. A new professional organization for all personnel involved in teacher education is being established. This could do much to improve communication among us and facilitate concerted effort. There are positive, optimistic signs. Yet there remain some concerns.

Among the concerns we must still list the pressure of population. Until teacher supply is really adequate, we shall have to battle efforts to lower quality in favor of quantity. Another concern is the current drying up of both state and federal funds available for priming the pumps of all education efforts today. So far we have been most fortunate. Let us hope that this continues, for it would be a paradox indeed if we should have to retract just at the point when a fruition of past efforts, researches and actions was about to occur. We shall be called upon the days ahead, I am sure, for still more expenditure of effort in our attempt to produce teachers and professionals well-equipped to serve the people in whom we are most interested. I am confident that we shall measure up to the task, but we cannot yet return to that comfortable feeling of confidence that prevailed in the forties. Perhaps we never shall, or never should, but, to borrow from a current often heard phrase, "We've come a long way." Let us hope that in the next twenty years we shall double the distance. We shall have to keep pace with the times.

RECENT RESEARCH ON PROFESSIONAL SKILLS AND PERSONAL CHARACTERISTICS OF STUDENT TEACHERS OF THE DEAF

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Very little empirical research evidence is available to support the intuitions of those responsible for the selection of students to train as teachers of the deaf. There is general agreement that a teacher of the deaf should have such characteristics as good health, warmth and understanding of the needs of children, patience, emotional stability, superior academic achievement, etc. (See, e.g., Lord and Kirk, 1950; Mackie et al., 1956; Murphy, 1963; O'Connor, 1963.)

Research has been carried on for some years at the Training Centre for Teachers of the Deaf, Kew, Australia, in an attempt to supply some empirical validation of these intuitions of experts in the area. This has been reported in detail elsewhere (Murphy, 1962; 1963; 1967; Power, 1970; 1972). In this paper, a brief overview of this research will be presented and some of its implications for selection and training of teachers of the deaf surveyed.

Power (1972) found that there were distinct differences between men and women students in personal characteristics. There was a significant correlation (+0.68) between final student practice teaching grade and final academic grade for men, but none for women. Factor analytic study of a battery of tests and other records supported this finding and indicated further that the best preselection predictors of both academic and practice teaching success as student teachers of the deaf for men were initial college academic grade and intelligence as measured by a group paper and pencil test. Neither of these measures were related to success for the group of women. Initial college teaching practice grades were not related to practice teaching success with deaf children for either the men or the women. This is interesting in that for both men and women, those who had had previous full-time teaching experience with hearing children achieved significantly higher teaching practice grades as student teachers of the deaf than those who had had no such experience. A number of personality test measures emerged as predictors of teaching success among women. Successful female student teachers tended to be warm and outgoing, enthusiastic, somewhat dependent on others and "suspecting" of other people's motives. These findings (based on Cattell's *16PF Test, Form C*) are summarized in Table 1.

TABLE 1.—RESULTS OF FACTOR ANALYSIS OF PERSONAL CHARACTERISTICS LOADINGS*

Variable	Total	Male	Female
Final teaching mark	60	81	46
Final academic mark	77	85	–
Initial college academic mark	40	86	–
Intelligence	38	39	–
16PF Test A (warm, outgoing)	–	–	64
16PF Test F (enthusiastic)	–	–	38
16PF Test L (Suspecting)	–	–	51
16PF Test N (sophisticated)	–	–	31
16PF Test Q2 (dependent)	–	–	59

– Loading less than 0.30.
*Decimal points omitted.

I. TEACHING SKILLS

Power (1970) has presented a factor analysis of a rating scale of 38 items related to skills deemed to be important for the classroom teacher of deaf children. He discovered the seven factors given in Table 2. (The figure before each item is its loading on the factor.)

TABLE 2.—RESULTS OF FACTOR ANALYSIS OF TEACHING SKILLS

FACTOR I

General Teaching Skills A—Techniques of Instruction

0.87: The standard of pre-planned aids (including blackboard preparation).

0.83: The student's prior thinking and thoughtful planning as reflected in his notes of lessons and the conduct of the lesson.

0.80: The student's willingness and ability to change his behavior in response to suggestions from the class teacher.

0.70: The student's ability to exploit opportunities for the use of the blackboard and appropriately selected aids.

0.62: The student's participation in group and school activities (both inside and outside the classroom).

0.60 The interest aroused by and the suitability of the student's introduction to his lesson.

0.52: The student's knowledge of his topics.

0.50: The student's correction of errors and provision for adequate remedial treatment, both immediately and in subsequent lessons, without causing tension in the child.

0.50: The student's ability to provide for differing individual needs.

0.49: The student's provision for and supervision of suitable application work.

0.46: The student's ability to achieve, in general, the aim of his lesson.

0.42: The student's ability to vary the tone and tempo of his lesson to avoid monotony.

0.42: The student's sensitivity to and understanding of the individual needs of children.

FACTOR II

General Teaching Skills B—Drive for Pupils' Comprehension of Material

0.76: The student's ability to draw all children into active participation in the lesson.

0.75: The student's ability to use appropriate questions and other means to check and recheck comprehension around the group.

0.64: The student's knowledge of and ability to handle the Fitzgerald Key.

0.63: The student's ability to vary the tone and tempo of his lesson to avoid monotony.

0.61: The student's persistent drive to ensure that all children understand the lesson.

0.60: The student's ability to ask thought-provoking questions.

0.59: The student's sensitivity to and understanding of the individual needs of children.

0.58: The student's ability to provide for these differing individual needs.

0.54: The student's ability to achieve, in general, the aim of his lesson.

0.50: The student's appreciation of the language levels of the children in the group and his ability to adjust his own language to these levels.

0.44: The interest aroused by and the suitability of the student's introduction to his lesson.

0.43: The student's ability to exploit opportunities for incidental teaching (especially in language and speech).

0.43: The student's provision for and supervision of suitable application work.

0.43: The student's correction of errors and provision for adequate remedial treatment, both immediately and in subsequent lessons, without causing tension in the child.

FACTOR III

Speech Teaching Skills

0.88: The student's ability to diagnose the nature of the child's speech errors.
0.87: The student's ability to apply speech correction without inducing tension in the child.
0.43: The student's understanding of the function of the hearing aid as evidenced by voice loudness levels, etc.
0.32: The student's own speech quality (including rhythm, articulation, pitch, loudness, etc.).
0.30: The student's ability to exploit opportunities for incidental teaching (especially in language and speech).

FACTOR IV

Clarity of Oral Communication

0.80: The student's ability to ensure that the group can lipread both his own speech and that of the other children in the group.
0.68: The student's own speech quality (including rhythm, articulation, pitch, loudness, etc.).
0.45: The student's understanding of the function of the hearing aid as evidenced by voice loudness levels, etc.
0.31: The student's appreciation of the language levels of the children in the group and his ability to adjust his own language to these levels.

FACTOR V

Manual Communication Skills

0.86: The fluency of the student's manual communication.
0.86: The ease with which the student's manual communications can be understood.
0.85: The student's ability to sign and/or finger-spell at an adequate rate.
0.84: The student's ability to synchronize grammatically correct manual communication and speech.
0.82: The student's ability to understand the children's communications.
0.61: The student's use of a judicious mixture of signs, finger-spelling and blackboard.

FACTOR VI

Relationships With Children

0.77: The student's ability to form warm, friendly relationships with the children.
0.42: The student's understanding of the function of the hearing aid as evidenced by voice loudness levels, etc.
0.34: The student's participation in group and school activities (both inside and outside the classroom).

FACTOR VII

Professional Attitudes

0.83: The student's punctuality.
0.61: The student's general bearing, manner and grooming are such as are expected of a professional person.

It can be seen that a large number of the items fall into two broad areas of "general teaching skills" which all classroom teachers should be presumed to have—some detailed techniques of instruction and group management and the ability to ensure that pupils really do understand what is being taught. It is very interesting that a traditional core skill in teaching deaf children ("the ability to adapt one's language to the needs of the deaf child") loads in this general teaching skill area rather than on any of the factors associated with skills particular to education of the deaf.

Three factors which seemed to be the essence of the particular skills of the teacher of the deaf emerged. These were designated "Speech Teaching Skills", "Clarity of Oral Communication" and "Manual Communication Skills". The items on these three factors may represent a minimum set of skills which every prospective teacher of the deaf should have under his control.

Two other factors designated "Relationships with Children" and "Professional Attitudes" also emerged from the factor analysis of the scale.

II. IMPLICATIONS FOR TRAINING TEACHERS

Replication of these results with an American sample is urgently needed, but there seems to be no reason to suspect very great differences between populations in these two countries in the dimensions under discussion, and some tentative generalizations of use to American educators of the deaf may perhaps be made:

1. It would seem that there is a case for all prospective teachers of the deaf to have previous full-time teaching experience with hearing children. This is supported not only by the fact that groups having had this experience perform better as student teachers in teaching deaf children, but also by the finding that a large number of the skills required of a teacher of the deaf are extrapolations of those required of all skilled teachers. This latter finding particularly implies that all teachers of the deaf should be fully trained as regular teachers before entering upon special training. In American terms, this may mean that all special training should be thought of in terms of master's degrees and that all entrants to these degrees should be required to have bachelor's degrees in an appropriate area of regular teaching.
2. It would seem that psychometric selection of candidates for entry to the profession cannot replace personal interviews and records of previous attainments and interests. The general opinion of leaders in the field that a teacher of the deaf needs to be a warm, enthusiastic person who values children and is concerned for their individual needs is supported by this research and selectors should continue to look for such characteristics in prospective entrants to the profession.

Research is continuing to expand these findings and to follow-up these students in their actual classroom behavior after finishing training.

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THE SPECIALIZATION OF EDUCATIONAL AUDIOLOGY

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Can we in this profession really believe that the hard of hearing child in the school for the deaf being taught as a deaf child or in the public schools being educated as a normal hearing child is receiving the full benefits of an appropriate education? As early as 1954, Brill (1954) recognized the inadequacies of the school for the deaf as an educational environment for hard of hearing children:

> When the hard of hearing child is placed with deaf children an injustice is done to both groups. The hard of hearing child generally is educationally so far advanced of the deaf child that he is not pressed to work up to his own capacity. In addition to being an injustice to the hard of hearing child it is an injustice to the deaf child because it continually puts the deaf child in a comparatively poor light. The necessity of developing language, the methods of teaching content subjects, and the methods of teaching speech, all should differ as applied to the two groups. The speech of the hard of hearing child is more likely to suffer through his association with the deaf child who has typically deaf speech than if the hard of hearing child had the opportunity to associate primarily with children who have normal hearing and thus have normal speech.

In the regular school, the hard of hearing child tends to become maladjusted. As compared to normal hearing children, he more frequently misunderstands the teacher, demonstrates poorer study habits, exhibits less desirable attitudes toward school, and reveals greater emotional variability. (O'Neill, 1964; Goetzinger, Harrison, and Baer, 1964). Fellendorf, (1966) states that few of our public school systems have provided properly for hard of hearing children since their needs are not as obvious and they are not as easily identified as deaf children. He feels that hard of hearing children can become deaf adults merely for the lack of attention to their educational needs.

Most educators of the hearing impaired agree that neither school for the deaf placement nor a regular public school without special assistance is appropriate placement for hard of hearing students, yet little has been done to provide special programs for the hard of hearing. In a survey conducted with schools for the deaf, 14 schools responded and none of these schools had special curriculum for hard of hearing children. Only one school had separate classes for the hard of hearing (Clark 1970).

Dyer (1969) surveyed sixty large school districts throughout the United States. She discovered that special classroom services were provided only at the lower elementary levels and that itinerant and resource services typically were deficient at all educational levels. A recent study (A Study of Current Practices in the Education of Hard of Hearing of Children, 1969) indicated that educational personnel of public school districts having fewer than 14,000 students are generally unaware of the need for special programming for hard of hearing children.

It seemed apparent that solutions to these problems had to be found. Certain questions had to be asked by the profession. Where should we start? Could we establish special programs for hard of hearing children, both itinerant and special classroom programs? Would such programs be effective without specially trained people to administer and to teach? Will programs develop as specialists trained to work with the hard of hearing become available? A new concept emerged as Utah State University dealt with these questions. This concept led the Department of Audiology Speech Pathology at USU to develop a program for preparing specialists known as educational audiologists to work with hard of hearing children. A Prospective Teacher Fellowship Grant under the Bureau of Higher Education, Office of Education was awarded to Utah State University. This grant made possible the development of the concept of educational audiology.

An educational audiologist should be prepared to work specifically with the hard of hearing child in all educational settings. These children are found in three educational environments; (1) The regular public school classroom; (2) the resource room and (3) the self contained classroom. A hard of hearing specialist needs a basic background in speech and hearing, educational methodology and audiology. He should have a strong program in the characteristics, educational and communicative needs, and educational and remedial methods appropriate for hard of hearing children. The student's practicum should prepare him to work as a teacher in a self contained classroom, a resource room, or as an itinerant who works with hard of hearing children who are in regular public school classrooms.

The program founded on these principles began in 1966 as a two-year graduate program with four graduate students. In 1969 the program was funded as a special project grant by the Office of Education Bureau of Education for the Handicapped in the area of Speech and Hearing. This funding was awarded to facilitate the development of the educational audiology specialization, and to stimulate the Office of Education to earmark training funds for a specific area of the hard of hearing.

Under the new grant, the program was modified to a five year program, beginning in the junior year and extending through the graduate year. The current educational audiology program is administered by the head of the Department of Communicative Disorders in the College of Education. The staff includes three speech pathologists, two clinical audiologists, and four educational audiologists.

To support the general philosophy stated earlier, the course work is planned to provide background in important basic areas of speech and hearing and general elementary education while providing a main emphasis in the characteristics, problems, and methodologies associated with hard of hearing children. To strengthen this course work and provide practical application, the students are involved in a practicum experience each quarter.

After spending his freshman and sophomore year filling general education requirements the student enters the department. All departmental students take a core of basic background courses such as anatomy of speech and hearing, phonetics, communication science, clinical methods and basic audiology. During the junior and senior year the students also take courses outside the department in early childhood, experimental psychology, introductory linguistics, etc. By the third quarter of the junior year the student must choose one of the majors within the department. In the spring of the junior year he is considered an educational audiology major and begins his specialized coursework and practicum. (See Appendix A).

This educational audiology student will have an eight-quarter program of specialization after having two quarters in general speech and hearing course work. The senior takes courses basic to educational and communicative treatment of hard of hearing students. He takes a course in teaching speech to the hard of hearing in the fall quarter to enable him to begin practicum in this area as soon as possible. During the senior year he has other basic courses such as speech reading, auditory training, and teaching language to the hearing impaired. At the same time he is completing his elementary education requirements. With work in the basic areas of (1) speech and hearing, (2) the hard of hearing, and (3) education, he is ready for sophisticated coursework and practicum in his graduate year. (See Appendix A)

During the graduate year, the student takes courses in hearing aids, the infant-pre-school hearing impaired child, curriculum for the hearing impaired, dactylology, media, psychometrics, etc. He is also registered for thesis. (See Appendix A) The students participate in full time practicum during spring quarter and complete their practicum and thesis during the fourth quarter of their graduate year.

Practicum begins winter quarter of the junior year and continues each quarter of the entire program. The student begins with two quarters of apprenticeship in the junior year. In this apprenticeship he gains an understanding of hard of hearing children through assisting senior and graduate clinicians, taking baseline data, and observing hearing impaired children in public schools, a resource room, special self contained classrooms and in a school for the deaf. During the fall and winter quarters of the senior year the student participates in clinical practicum dealing with the hard of hearing. This practicum consists of diagnostic, remedial and developmental work in communication skills. The student then has a three quarter sequence during spring quarter of the senior year and the first two quarters of the graduate year. During this sequence: (1) he has practicum in a hearing impaired diagnostic clinic where he works with a clinical audiologist conducting a complete audiological workup, a case history, communicative and educational diagnostic testing and staffing; (2) he works with an itinerant hearing clinician in the public schools providing communicative training, language, reading, vocabulary and subject matter tutoring as appropriate; (3) he works in a resource room for hard of hearing children. The student observes, participates and takes over the teaching and communicative work in one or two areas. His full time public school practicum is done during the spring quarter of the graduate year. (See Appendix B.)

Up to the current year the full time practicum was done in a residential school for the deaf. Next year the full time practicum will be expanded to include an itinerant hearing clinician experience and resource room teaching.

Before the full time practicum commences, the supervising teachers and clinicians participate in a three day workshop on supervision of student teachers and clinicians. The people acting as supervisors are given intensive work in supervision and are given guides and instruments to assist them in this supervision.

During the student's program he has educational and professional experiences supplemental to his course work and practicum. He participates in two week long educational field trips which are designed to give him first hand experience with various programs for hard of hearing children. During these visits the students are paired with hearing clinicians and accompany them as they make their daily visits. Also during the program the students participate in telalectures, attend lectures of guest speakers, and are active in a student speech and hearing organization.

The program is completing its fifth year of service. Currently, the grant provides for six senior fellowships, and ten graduate fellowships. Eighteen people have completed the program and are currently employed in various settings for hearing impaired children. At this time, ten are serving as teachers of the hearing impaired, six are serving as itinerants and two are working as school audiologists. The first graduates of the program have been in the field for three years and it is hoped that as these people gain experience they will move into leadership roles and be instrumental in developing new programs for the hard of hearing.

During the five-year existence of the program a comprehensive summer institute on the characteristics and needs of hard of hearing children was held. A book, *The Hard of Hearing Child*, has been an out-growth of this summer institute and other programs associated with the educational audiology program.

From the time of inception of the program to the present there have been major changes in the curriculum. There were no programs for preparing teachers or specialists after which USU could model their program. Therefore it became necessary to develop a completely new curriculum. This required drawing courses from several major areas and coordinating and sequencing them for a maximum educational experience. For the first three years, classes were changed while some classes were added and other classes were dropped. During the last two years the curriculum has remained rather constant but there have been major changes in the practicum. With the assistance of two consultants provided by the Office of Education a curriculum analysis tool was developed which would assist in evaluating relevance of the course work to the actual job of hearing clinician in the public schools. Instructors teaching courses in the required curriculum listed approximately 10 goals for their classes. These were compiled into one questionnaire and sent to hearing clinicians throughout the United States (See Appendix D). A workshop was held at which clinicians and directors of programs for hard of hearing children, consultants and other advisors participated. This workshop focused on the needs of the hard of hearing child and on what is currently being done in the representative program. The participants then examined the curriculum of the educational audiology program to evaluate the relevancy of this curriculum to the actual job of the hearing clinician.

The questionnaires have not all been returned and tabulated. The workshop was held June 18 and 19 and so the proceedings have not yet been written. It is felt that both of these sources of curriculum evaluation will be of great value in assisting the program to keep the course work and practicum highly relevant to the actual position of hearing clinician.

As in the development of any new job description there exists differences of opinion as to what the actual role of the educational audiologist or hearing clinician should be. However, certain definite trends are appearing: (1) More handicapped children will be educated in the regular classroom. (2) A hearing clinician or educational audiologist will be working with children who are in regular classrooms. (3) He will be working primarily as an itinerant or as a resource teacher. (4) He needs a strong background in audiology, education, and the hard of hearing child.

We feel confident that the future of the hard of hearing child is brighter. We believe that a new specialization has been created which will fill a very pressing need in the American educational system. Even though good programs for hard of hearing children are few many educators are now aware of the needs of the hard of hearing child. We will see the growth of organized programs to serve hard of hearing children.

APPENDIX A

CURRICULA

The course work of the educational audiology specialization is offered within the context of the curriculum of the College of Education particularly the Department of Communicative Disorders. It encompasses considerable content applicable to understanding the characteristics and meeting the special needs of the hard of hearing child and includes:

(1) Underpinning in acoustics, acoustic phonetics, anatomy, communication and information theory, electro-acoustics, human growth, learning, and linguistics.

(2) Competencies and/or understandings from audiology, clinical processes, counseling, education of the hearing impaired, educational technology, general professional education, psychology, precision teaching, and speech pathology.

The 186+ quarter hour undergraduate program requires a minimum of 3 credits in physical education; 9 in basic communications; 43 in general education; 15 in foundations; 60 in a composite major (pending) of educational audiology, general professional education, and speech pathology; and 35 in electives. Appropriate foundation course work for the educational audiology specialization may be drawn from the following:

	Credits
Early childhood	5
Elementary general psychology	5
Experimental psychology	3
General physics	5
Human physiology	5
Introduction to communicative disorders	5
Introduction to linguistics	5

The student characteristically is a major in the Department of Communicative Disorders at the beginning of the junior year. As such he does not need to identify himself with any of the three specializations offered, i.e., (clinical) audiology, educational audiology, or speech pathology. During the Spring quarter he registers for his first course work designed for the educational audiology specialization. Thereafter, his study program is unique through completion of a 5th year of study.

A TYPICAL JUNIOR-YEAR REGISTRATION

	Fall	Winter	Spring
Anatomy of speech and hearing	5		
Education of exceptional children	3		
Introduction to communicative disorders	5		
Phonetics (and phonemics)	3		
Apprenticeship in communicative disorders		1	
Clinical processes		3	
Fundementals of communicative science		5	
Speech, hearing and language development		3	
Statistics in education and psychology		3	
Apprenticeship in educational audiology			1
Basic audiometry			3
Disorders of articulation			5
Education of the hearing impaired			3
Principles of learning			3
Total	16	15	15

A CHARACTERISTIC SENIOR-YEAR REGISTRATION

	Fall	Winter	Spring
Internship in educational audiology	1		
Fundamental studies in teaching	5		
Language disorders and hearing impairment	3		
Speech for the hearing impaired	3		
Speech audiometry	3		
Arithmetic in elementary schools		3	
Internship in educational audiology (clinic therapy)		2	
Speech reading		3	
Teaching language to the hearing impaired		3	
Teaching of reading		3	
Internship in educational audiology (resource classroom)			2
Introduction to research in communicative disorders			3
Auditory training			3
Social studies in the elementary schools			3
Teaching reading to the hearing impaired			3
Total	15	14	14

The graduate study program in educational audiology functions either (1) as the extension of the undergraduate specialization or (2) as an entity in itself for a new student. In the first instance the student's curricula might be as follows:

	Fall	Winter	Spring	Summer
Apprenticeship in educational audiology (several models of delivery of services)	1			
Hearing aids	3			
Language disorders and hearing impairment	3			
Principles of learning	3			
Speech for the hearing impaired	3			
Thesis (plan B)	2			
Clinical process		3		
Curriculum for the hearing impaired		3		
Internship in educational audiology (resource room)		1		
Seminar in educational audiology (auditory training)		2		
Speech reading		3		
Teaching language to the hearing impaired		3		
Public school internship in educational audiology (classroom and itinerant)			12	
Seminar in educational audiology (teaching reading to the hearing impaired)			3	
Counseling parents of exceptional children				3
Education of the hearing impaired				3
Medical backgrounds in communicative disorders				4
Speech audiometry				3
Thesis (plan B)				2
Total	15	15	15	15

APPENDIX B

Description of apprenticeship and practicum in educational audiology.

Winter Quarter, junior year apprenticeship. Students first association with hearing impaired children. They observe, assist senior and graduate clinicians and do base line recording work on various behavior.

Spring Quarter, apprenticeship junior year. The students will observe hearing impaired children being served in various settings, i.e., clinical public school itinerant, resource room, self-contained classroom.

Fall Quarter, senior year internship. Clinical, diagnostic, remedial and developmental speech with college age hearing impaired students in USU's Facilitative Program for the Hard of Hearing.

Winter Quarter, senior year internship. Clinical, diagnostic, remedial and developmental work in communication skills with college hearing impaired students.

Spring Quarter, senior year
Fall Quarter, graduate year
Winter Quarter, graduate year

A three quarter sequence in: (a) hearing impaired diagnostic clinic (b) resource room for hard of hearing children, (c) itinerant work in the public schools with hearing impaired children. All three practicums will be held each quarter with the students being evenly distributed in each practicum.

(a) Hearing impaired diagnostic clinic. Two educational audiology students will work with one clinical and audiology student and be supervised by staff from both areas. The students will conduct a complete audiological workup, a case history, a communicative and educational diagnostic workup, staff each case and write a report. The case load will be drawn from the local school districts, USU's laboratory school hard of hearing program, college hearing impaired students and hearing impaired students from the Intermountain Indian School.

(b) Resource Room. The students will observe, assist and teach in the resource room in the USU laboratory school. They will work with the teacher in the integration program.

(c) Itinerant work in the public schools. The students will work under an educational audiologist who will have a case load of hearing impaired students in two local school districts.

Spring Quarter, graduate year full-time public school practicum. All students will be placed in one of the following units:

Idaho School for the Deaf—Self contained classroom-School Audiology
Logan—resource room
Logan—itinerant educational audiologist
Ogden—Self contained classroom of hard of hearing students in a public school
Salt Lake City—two self contained classrooms of hard of hearing students in public schools
Granite—resource room
Granite—itinerant educational audiologist

The students will be placed in these practicum areas according to need and specified interest. The students will work full time for five weeks then return to the USU campus for two days for student teaching conferences then return for five more weeks of practicum. The practicum will be directed by the university supervisor and directly supervised by the teacher or itinerant specialist.

APPENDIX C

The internship program is designed to meet performance based criteria as follows:

EVALUATIVE AREA

Student will demonstrate proficiency in:
Scheduling cases.
Coordinating testing services.

EVALUATIVE AREA

Students will demonstrate proficiency in:
Written reports.
Hearing screening.
Speech screening.

Obtaining pure tone audiometric thresholds.
Obtaining speech reception thresholds.
Obtaining speech discrimination scores.
Evaluating speech proficiency.
Evaluating language proficiency.
Evaluating speechreading proficiency.
Evaluating and identifying reading problems.
Evaluate written compositional skills.
Interpretation of psychological test results.
Interpretation of academic achievement test results.
Understanding the hearing aid evaluative process.
Using diagnostic information in the remedial and developmental clinical and educational setting.

REMEDIAL-DEVELOPMENTAL AREAS

Students will demonstrate proficiency in:
Scheduling cases for itinerant or resource room service.
Coordinating supportive services among school personnel.
Writing progress reports.
Classroom control.
Teaching subject matter areas.
Use of education media.
Development of communicative skills within the classroom.
Consulting with parents concerning the making of facilitative adjustments in the home and the community.
Consulting with specific school personnel concerning the making of helpful educational adjustments.
Speech training.
Speechreading instruction.
Auditory training.
The management of hearing aids and accessories.
Language instruction.
Reading training.
Subject matter tutoring.
Understanding hearing impaired children and their special problems.

APPENDIX D-(a)

Students taking the course *Clinical Process and Behavior* will:	*Extent of use*	*Importance to a training program*
(Cd I)		
(74) Understand the importance of the facilitative dimensions of therapy (i.e., empathy, respect)	------	------
(75) Make a functional analysis of his own therapeutic interaction by behavioral event typescript	------	------
(76) Analyze his own therapeutic interaction by means of a Boone analysis	------	------
(77) Dissect the therapy process in terms of lingitudinal (over a period of time) and topographic analyses (categories of clinical behaviors.)	------	------
(78) Be able to measure behaviors of speech, hearing, and language	------	------
(79) Select and measure probe (i.e., sample task items to be recorded and graphed) items for each of the behavioral parameters of speech and language	------	------
(80) Utilize the Lindsley 6 cycle logarithmic graph and interpret acceleration and rate data	------	------
(Cd II)		
(31) Write a functional lesson plan specifying terminal objectives, specific behavioral objectives, evaluative criteria of the objectives and total planning success	------	------
(32) Conduct a satisfactory clinical interview	------	------
(33) Keep satisfactory personal clinical case records	------	------
(34) Be able to write a professional report	------	------
(35) Measure the ratio of his own clinical verbal behavior as compared with client verbal behavior	------	------
(36) Conduct a satisfactory parent counseling session	------	------
(37) Demonstrate proficiency in the operation of clinical tools (tape recorders, cassettes, etc.)	------	------

APPENDIX D–(b)

Student taking the course *Reading for the Hearing Impaired* will: (Cd V)	*Extent of use*	*Importance to a training program*
(65) Understand the effect of hearing loss and language deprivation on reading	------	------
(66) Establish correct level of reading ability by administering and interpreting informal reading inventories	------	------
(67) Isolate and diagnose specific reading problems by giving the Durrell Analysis of Reading Difficulty to hearing impaired children	------	------
(68) Establish grade level of reading by administering standardised reading tests	------	------
(69) Demonstrate knowledge of criteria for selecting reading books for hearing impaired children by actually evaluating and choosing basal reading texts	------	------
(70) Write lesson plans and unit plans for reading programs and lessons	------	------
(71) Evaluate procedures for teaching structural reading skills and phonic reading skills and be able to choose the program most appropriate for specific hard of hearing children	------	------
(72) Understand the strengths, weaknesses, and application to the hard of hearing child of current programmed reading materials	------	------
(73) Be familiar with the Chicago Non-Oral Reading Method for teaching beginning reading	------	------

TEACHER PREPARATION—AFTERNOON SESSION

The afternoon session consisted of an informal group discussion. The group directed themselves to the basic issue of teacher preparation—how to prepare better qualified teachers.

The question arose as to whether a teacher is better prepared by indepth exposure to a specific methodology, development of a given set of competencies on development of the ability to selectively use techniques available. Further discussion touched on specific suggestions for improvement of teacher preparation rather than a resolution of one approach over another.

A discussion of the elements of a program preparing teachers of the hard of hearing suggested that the needs of hearing impaired children are on a continuum. Therefore, a program preparing teaching of the deaf must include elements common to deaf and hard of hearing children, especially skills in auditory training.

Another specific suggestion for improvement of the quality of teachers was the extension of time of the training program. There was a recommendation following the discussion that there should be a provision for a paid internship as part of the teacher preparation program, jointly supervised by university and school personnel. The intern acting as a para-professional on a classroom teacher under the direction of an experienced teacher were options discussed for implementation.

A final point of discussion arising from the recommendation was concerned with viewing teaching preparation as a continuing educational process. The concept of periodic paid sabbaticals for classroom teachers to take further course work and gain additional educational experiences was presented.

POST-SECONDARY PROGRAMS

9:00 a.m.–2:30 p.m.: Chairman: Robert Lauritsen, Project Coordinator, Technical Vocational Program for Deaf Students, St. Paul Area Technical Vocational Institute.

9:00 a.m.–11:45 a.m.: "*Meaningful Interpretation of Complex Test Results for Post-Secondary Planning*", Dr. Gerard Walter, Research Associate, The National Technical Institute for the Deaf, Rochester, Institute of Technology, Rochester, N.Y.; "*Measuring the College Potential of the Hearing Impaired*", Bernard L. Greenberg, Director of Admissions and Records, Gallaudet College, Washington, D.C.; "*Educationally Significant Traits of NTID Students*", James Titus and Barbara Hanner, The National Technical Institute for the Deaf, Rochester, N.Y.; "*Counseling the Post-Secondary Deaf Student: Implications for Elementary and Secondary Education,*" Dr. James Collins, Assistant Dean for Developmental Education, The National Technical Institute for the Deaf, Rochester, N.Y.

1:30 p.m.–2:30 p.m.: "*The Impact of Emerging Post-Secondary Programs on Education of the Deaf*", A Panel-Audience Dialogue. Members of the Panel will be those persons who have presented papers during the Post-Secondary Section Meetings.

MEANINGFUL INTERPRETATION OF COMPLEX TEST RESULTS FOR POST-SECONDARY PLANNING

Gerard G. Walter, Ed. D., Research Associate, The National Technical Institute for the Deaf

The National Technical Institute for the Deaf has been established "to provide special support services within an institution of higher learning which facilitate and encourage deaf students to achieve a high degree of personal, social, and cultural development."[1] The achievement of this objective necessarily implies the establishment of an intricate process of counseling and program placement. Services such as counseling and placement have a need for input of an evaluative nature concerning the achievement, aptitude, interest and communication skills of any given deaf student. As part of its applied research activities, NTID is currently concerned with the search for instruments and methods to aid in this counseling and program placement process. This requires input from various sources including biographical, academic and interest data. The research program of the National Technical Institute for the Deaf is developing a method for treating such diverse information in a meaningful manner. This paper is a report of work that is being carried out on the development of a student profile system. The system is by no means complete at the present time. It is continuing to undergo refinement and validation which will determine, to a large extent, the final structure of the system.

The question is a simple one. How can we best place students in programs that are commensurate with their interests, abilities, and communication skills? The primary purpose of testing at NTID is to assist the student. Diagnostic testing, for example, is applied extensively, not for the purpose of assigning grades, but in order to individualize instruction in profitable directions. As is apparent from the reports of *Profiles of Students Entering NTID*,[2] [3] extensive test data is available on entering students. The objective of this system is to order that information in a meaningful way so that it is readily interpretable by counselors, academic advisors, or anyone directly involved in the program placement and counseling of students.

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[1] Objectives of NTID, #1, Report of First Year Ending December 31, 1967.

Nothing can be more confusing than an attempt to use a set of unrelated test data for which there exists no adequate information for the group of individuals to which the tests are being applied. Psycho-educational measurement in the field of deafness has long been lacking in any good standardization of test instruments. The profile system, as we have conceived, it, is an attempt to provide a frame of rereference for the information that is collected from various sources at the National Technical Institute for the Deaf. At the time of this writing, the system has been designed to treat information in four areas:

Achievement
Aptitude
Communication
Interest

In addition to this, the research staff of NTID is presently engaged in the development of instruments which will tap attitudes, values, and social development of deaf students. It is anticipated that in the future, information relating to these areas will be incorporated into the system.

The following Table illustrates the sub-scores that make up the profile for each of the four areas. The base of the data under Achievement comes from the Comparative Guidance and Placement Program of the Educational Testing Service. The Aptitude test is made up primarily from sub-tests of the Differential Aptitude Battery; the Interest scores come from the Comparative Guidance and Placement Program, and the Communication Profile is made up of scores from the Communications Profile developed at the NTID Communication Center. By reference to Table 1, one can see how instruments have been grouped to produce a set of four profiles.

TABLE 1.—SUBSCORES MAKING UP THE FOUR AREAS OF APTITUDE, ACHIEVEMENT, INTEREST AND COMMUNICATION

APTITUDE

Verbal Reasoning
Numerical Ability
Mechanical Reasoning
Space Relations

Abstract Reasoning
Mosaic Comparisons
Clerical Speed & Accuracy
Letter Groups

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[2] Walter, Gerard G. *A Profile of Students Entering NTID in 1969*, Rochester Institute of Technology, December, 1969.

[3] Walter, Gerard G. *A Profile of Students Entering NTID in 1970*, Rochester Institute of Technology, June, 1971.

ACHIEVEMENT

Reading
Verbal
Year 2000
Spelling
Sentences
Mathematics
Science

INTEREST

Mathematics
Physical Science
Technology
Biological Science
Health
Home Economics
Secretarial
Business
Social Science
Fine Arts
Music

COMMUNICATION

Speech Reading with Sound
Speech Reading without Sound
Speech Intelligibility
Articulation Skills
Vocal Characteristics
Vocal Functioning
Hearing Discrimination
Simultaneous Receptive
Manual Receptive

The system has been designed, as it now stands, to fulfill a need on the part of counselors and individuals concerned with student choice of a program to provide meaningful information concerning a student's abilities, interests, and communication skills relative to the various programs of study offered by RIT and NTID. The objective of this system is to provide NTID personnel with information about students' abilities, interests and communication skills in a meaningful way, and to provide this information with a frame of reference based on local normative information.

The development of any system or set of normative information requires establishment of a starting point. The starting point for our profiling system is with the students who were enrolled in the National Technical Institute for the Deaf as of September, 1970. Since virtually no normative information is available about deaf students for the instruments used as a base for the data comprising our system, students enrolled in various programs within RIT and NTID were used as a beginning normative population for the development of our system.

Since NTID is only three years old, there is yet no tradition of success across all programs, so the prediction of success through such a system is, at the present time, virtually impossible. On the other hand, profiles and other information are available on students who are currently enrolled in the various programs of study. We have developed profiles that describe the characteristics of students in each of these programs—this is our starting point. What has been done, then, is to divide all programs into ten broad areas in which students, enrolled at the National Technical Institute for the Deaf, can major: five degree programs, four certificate-diploma-associate programs, and the Vestibule or preparatory program. The specific programs are listed below:

Degree Business
Degree Graphic Arts and Photography
Degree Fine Arts
Degree Science
Degree Engineering
CDA Technology
CDA Biomedical
CDA Visual Communication
CDA Business
Vestibule

Our primary purpose is to assist the student in making a meaningful choice of a major area of study. The system which I am about to describe can provide the counselor and academic advisor with test data interpreted according to the programs available to a student enrolled at the National Technical Institute for the Deaf.

The methodology that is involved in the system requires that each of the four student profiles (as listed in Table 1) be compared with the descriptive profile in each of the 10 areas listed above. By comparing an individual student's profile with the average profile for each of the programs of study, a judgment can be made as to the student's "best fit" to each of the program areas. The system, as it has been developed, is designed to provide an empirical derivation for a student's similarity or lack of similarity to each of the 10 programs of study listed above relative to his interests, achievement, aptitudes, and communication skills. Let us take an example of how the system would work conceptually, without becoming bogged down in the mathematical formula for fitting the profiles. To simplify matters, I will use only the interest profile for three of the ten average profiles described above. We have gathered information on Johnnie B. for each of the subscores of the Interest test. We then compare Johnnie B.'s profile (see Table 2) with the average profile for 3 of the 10 programs of study. We can then arrive, mathematically, at a score that will indicate where Johnnie's best fit is relative to his interest profile.

Table 3 provides a sample output from the system. The range of scores can be from 1 (which is a good fit) to 15 (which will be a poor fit). By rank ordering, a grouping of the student's interests can be gained. In a similar way, comparison can be made for aptitude, achievement and communication profiles for all ten programs described above.

TABLE 2

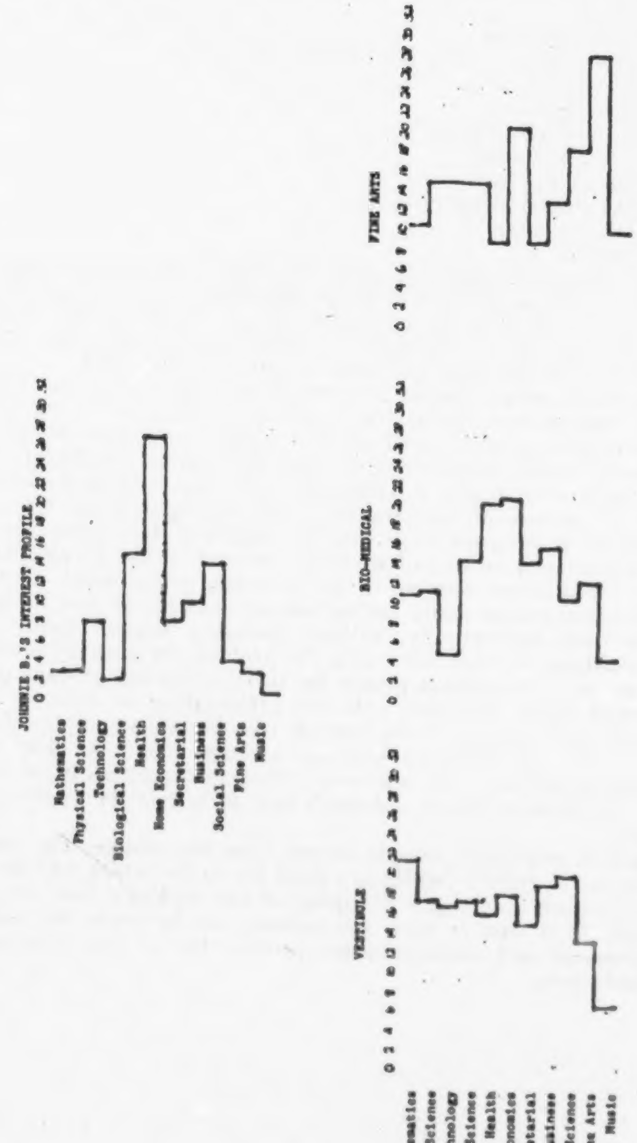
JOHNNIE B.'S INTEREST PROFILE
BIO-MEDICAL
FINE ARTS
VESTIBULE
0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32
Mathematics
Physical Science
Technology
Biological Science
Health
Home Economics
Secretarial
Business
Social Science
Fine Arts
Music

TABLE 3.—RANK-ORDERING OF JOHNNIE B.'S BEST FIT SCORES FOR EACH OF 10 AREAS OF STUDY AT NTID

Program	*Score*
CDA biomedical	5. 26
Vestibule	9. 04
Fine arts	9. 13

By providing information of this type, a frame of reference—students already in programs at NTID—is available for making judgments about possible program choices for Johnnie B. It should be stressed, however, that the system provides no information as to the probable success of an individual student in a specific area of study. However, research is now underway to provide information that will allow our method to give an empirical account of a student's most likely area of success. This is only possible after NTID has a history of "successful" students. This will provide a continuing area of development for the system.

This system has been designed using the IBM 1500APL Program which allows direct interaction for the user. In short, the program asks for scores of the student on each of the variables within the areas given in Table 1, and then compares this profile with the standard profile of students in each of the ten areas described above. Thus, a student's profile will be compared in order with the CDA Biomedical, CDA Visual Communication, CDA Business, CDA Technology, Degree Engineering, Degree Graphic Arts and Photography, Degree Fine Arts, and Vestibule program. After the comparisons are completed (utilizing the various formulae), the scores of best fit are then rank ordered, the best fit being given first place, the least best fit being given the tenth position. This rank ordering should give the user some indication of those areas where the student might best succeed.

The system, as it is currently designed, allows the counselor, researcher, or academic advisor to input scores for any individual student on any of the four areas (Interest, Aptitude, Achievement, Communication) and retrieve, by use of this system, a rank ordering of best fit of the student's profile in that area relative to each of the ten programs open to the NTID students. For example, by inputting the scores for each of the sub-tests for any given student, we can retrieve the rank ordering of the student's best fit profile. Using this information—comparing the profiles with each of the other programs and noting where the best fit is—the counselor or advisor can then direct the student into those areas of study that seem to be most congruent with his interests, abilities and communication skills.

We have described, very generally, various instruments and an approach to developing a profile system. We recognize that each of these instruments may not be the most valid or reliable method for obtaining information from deaf students. However, at the present time we are interested primarily in the development and improvement of the system. As time and research permit, new instruments will be added to replace those that are not providing adequate information. In addition, the area of social and personal development is not included. It is our hope that the future will permit the development of adequate instrumentation to include a profile based on social and/or personal development of deaf students. Research on test development, validation and reliability is time consuming, and requires a great deal of background information on the population for which the instruments are being developed. NTID offers the ability to develop such instrumentation in the laboratory setting and hopefully, with time, adequate instrumentation will become available and with this, adequate normative information.

MEASURING THE COLLEGE POTENTIAL OF THE HEARING IMPAIRED

Bernard L. Greenberg, B.A., M.A., Director of Admissions and Records, Gallaudet College

Today in the United States about half of the entire post-high school age group enters some type of college program; but it has not always been so. A generation ago higher education was pretty much the preserve of an intellectual or financial elite. The change did not come about through any reasoned philosophical commitment to mass higher education. It was, in fact, the direct result of the post-World War II, GI Bill of Rights which provided free schooling and subsistence allowances for veterans, many young men with no particular academic ambitions and seeing at first nothing more than a free ride on the Government for a few years found themselves unexpectedly with bachelors and even advanced degrees. Employers, suiting the demand to the supply, began to require college graduation for most positions above the clerical. This economic incentive insured that the non-veteran population, too, would flood the colleges.

The deaf, being for the most part not directly affected by the GI Bill and traditionally a rather self-contained society with the educated deaf being employed principally in teaching other deaf, were for some time untouched by this revolution in education. As recently as ten years ago Gallaudet typically graduated fewer than 50 students annually out of an estimated deaf population in the target age group of about 2000. Admission then was a comparatively simple matter. Self-selection was almost good enough—anyone who applied could be assumed to have academic interests, abilities and motivation.

Today, this is no longer the case. College graduation has become so much a maximum qualification for the most desirable jobs and so much a mark of social status that numbers of students with no personal academic ambitions find themselves pressured from all sides to undertake higher education. Now, the deaf being a virtually random sample of the population, drawn from all classes, ethnic and racial groups and both sexes, it can be assumed that, as among the hearing population, some of the deaf population are and others are not capable of profiting from advanced education. Years ago, faced with the problem of distinguishing these two groups in the hearing population, other colleges through the ECEB developed tests that were reasonably efficient in assorting the general population, so that the brilliant could be distinguished from the superior, the superior from the able, the able from the average, and the average from the sub-marginal. The tests assumed, correctly, that there would be little need to divide the sub-marginal into categories, and have for this reason often proved inadequate for measuring college potential among language handicapped populations. Faced with an ever-increasing demand and limited facilities, some years ago it became evident that Gallaudet required some more refined methodology for determining which students could handle our curriculum.

When I say "limited facilities" I am not referring to such things as classroom and dormitory space or even qualified teaching staff, but rather to the state-of-the-art limitation on remedial programs. All handicapped groups, including the deaf, have a small number who escape being blighted educationally by their handicap. These happy few are not our concern—they are readily recognized by the admission officer and readily taught by the academic staff. But 90 percent of Gallaudet's applicant population today show a degree of language retardation which significantly prejudices their adaptability to handle our curriculum. It should be noted, however, that on the average the deaf population is not markedly deficient in mathematics skills, apart from the fact that they have generally not been offered advanced course material. Language is the root problem and it is here that we are limited. At Gallaudet we offer one year of pre-college remedial work and occasionally two. Neither we nor anyone else knows whether total educational reconstruction of young adults is possible. At present it is not practicable.

Gallaudet, for many years the only facility in the world to offer higher education to the hearing handicapped, has a policy of accepting every applicant who has a reasonable outside chance of succeeding with our curriculum. Although the increasing pressure has been alleviated somewhat in recent years by the establishment of a number of alternative institutions for those not willing or able to undertake a liberal arts program, we seem to have settled down to a chronic condition of about half of our applicants being beyond the reach of our present remedial offerings. With over 700 applicants for 1971 admissions, the problem of distinguishing those with reparable language deficits from those whose problems are now beyond our reach is a major one.

Gallaudet's admissions process is based on several assumptions:

(1) Ability to do college-level work depends primarily on intellectual capacity and academic skills. Both must be present to a useful degree.

(2) The most essential academic skill is the ability to comprehend written material, with the ability to write comprehensibly and accurately following close behind. For students with scientific or technical aspirations mathematical skills are also crucial.

(3) Subject matter knowledge is secondary to skills. If a student has adequate skills, deficits in knowledges are comparatively easy to repair.

(4) Though early onset hearing loss usually wreaks educational havoc, the individual with high innate capacity will almost invariably show elevated ability in *some* area.

For these reasons, we have designed an extensive evaluation battery covering as many different skill areas in as many different formats as practicable, to give the candidate maximum opportunity to demonstrate his abilities. We look on our admissions screening as a talent hunt. Our interest is not in cataloguing weaknesses but in ferreting out strengths, always bearing in mind that some minimum level of the essential academic skills must exist. We are in the business of screening *in*, not screening out.

In designing our battery, we set about, first, to measure the three basic academic skills—reading, writing and math. To these skill areas we add two others—vocabulary and grammar—which logically are subsidiary parts of reading and writing, but which have proved to have independent value warranting their being given coordinate status. To measure these five areas we use 12 different tests, five of which are commercially available standardized tests and seven of which have been prepared and validated especially for use with the hearing handicapped. In addition, the battery includes six auxiliary tests measuring such areas as non-verbal intelligence, concept formulation and interest in science, four of which were designed specifically for Gallaudet's use. Finally we consider a rating of motivation derived from the applicant's secondary school evaluations.

Since none of these twenty measures overlaps more than 50 percent with any other in the battery, it is probably that each is contributing at least a little something unique to our knowledge about the candidates. With a few exceptions each of the measures is significantly related to four-year grade-point average and to remaining in college till graduation.

How do we set about digesting this large and heterogeneous mass of information in order to make admissions decisions? Essentially, we categorize the applicant population into six broad groups, according to their tested competence in the five major skill areas:

Group I consists of applicants who are superior in all five skills. This is the group who have not been seriously disadvantaged by their handicap. They constitute about 10 percent of the applicant population.

Group II consists of those who are superior in four of the five skills. These are usually representatives of that familiar class of very able individuals who are undone by mathematics. These represent some 2 to 3 percent of the applicants.

Group III is defined as those applicants who do not meet the criteria for the first two groups but who have at least a moderate level of skill in all four basic areas. We define this minimum level pragmatically in terms of what our many years of experience tell us can be accomplished in a year of remedial work. We do not use grade-levels since they are of dubious value and stability, but the minimum ability level probably is generally about that of the 7th grade. Beyond this minimum competence requirement, moreover, for inclusion in Group III we require that the applicant show several areas of distinct strength. About a fifth of the applicants fall into this group.

Group IV is made up of applicants who meet this moderate skill level on three or four of the basic areas and who, in addition, show strength on a number of tests. The entire record of these applicants is scrutinized minutely, with special emphasis on motivation. Group IV also comprehends about a fifth of the applicant population.

Group V consists of applicants who meet none of the above standards but who show some other sign of potential, for example, very elevated intelligence of science scores, extremely favorable recommendations, or scores in the four primary skill areas which approach those needed for inclusion in Group III. The entire record of those in Group V, too, is reviewed with great care, again with emphasis on motivation. About 15 percent of the applicants fall into this category.

Group VI are those who are performing at an extremely low level and who have been unable to muster any evidence that they have the potential to handle a college curriculum in the reasonably near future. About a third of the applicants are in Group VI.

All candidates are reviewed for suitability—age, character, hearing loss, health and the like—before being granted admission.

Admission is generally offered to all members of Groups I, II, and III, who are otherwise suitable. About two-thirds of Group IV are admitted and about one-third of Group V. Those in Group VI are not offered admission. In all, about half of the applicant group are admitted each year. Except for Groups I and II, all those admitted—about 80 percent of the total—are required to take a year of remedial work before entering the college proper.

Bringing professional judgment to bear on each candidate's credentials may be more time consuming than a simple cutting point approach (though our computer is programmed to do the initial categorization of applicants into the six basic groups), but it is less wasteful of student potential. It appears to be highly valid:

> Those in Group I have 3 chances out of 4 of graduating, and 2 chances out of 3 of earning at least a B average.
>
> Those in Group II graduate in 2 out of 3 cases, and have an even chance of earning a B average or better.
>
> Those in Group III have a 50–50 chance of graduating, and have one chance in 3 of a B average.
>
> In Group IV only 1 in 3 who are accepted graduates, and only 1 in 10 earns a B average.
>
> Those accepted from Group V have only 1 chance in 4 of graduating, and virtually no chance of earning a B average.
>
> It is clear from this progression that those in Group VI would have very little possibility of success if they were granted admission.

We do not consider that our obligation to an applicant has been fulfilled when we accept or reject him. We believe that accepted applicants should be told the areas, if any, in which they are weak in comparison to the average enrollee and that rejected candidates have a right to know the nature and extent of their academic problem so that they can plan their future realistically. It is unfair to an individual performing at the low grammar school level in most skill areas to mislead him into believing that he might be admitted to Gallaudet the following year if he brushes up a bit on his grammar, for instance. We know from very extensive experience that general and profound deficits are never easily and quickly repaired. Unsuccessful applicants with less severe deficits should, we believe, be encouraged to continue to pursue the goal of a college education.

We have not, however, finished with our admissions battery once we have notified applicants as to admission. As I have mentioned, Gallaudet requires about 80 percent of each incoming class to take a year of remedial work before attempting the college curriculum.

These students are placed in classes of 15 or fewer in accordance with their general level of language ability and their specific deficiencies are diagnosed by the admissions tests. General verbal level is determined by a weighted combination of all verbal tests in the admissions battery. The weights used were derived, not from the textbook regression equation, but judgmentally, taking into account differences in standard deviations. We tried both judgmental and regression weighting and found the judgmental method less subject to shrinkage from class to class than the regression weights. After general verbal level has been determined, the student may be placed in a group whose members are all especially deficient in formal grammar, or in vocabulary knowledge, or in reading comprehension and so on. Course content is tailored for the general ability level of the group with emphasis on the areas of most severe deficit. Remedial mathematics, as we practice it, is more traditional with classes in the usual subject matter areas.

At the end of this preparatory year, students are retested. Whether or not they are admitted to the college proper depends primarily on their instructors' evaluations of their work and on what measurable improvement they have made on the tests. Since most of the students taking the remedial program were several years behind normal high school graduate achievement to begin with, we cannot expect them to make up the entire deficit in a single year. Thus, most of them enter their Freshman year still with weaker skills than the normal college student. But they are on the upswing. With good instruction and continued motivation, they move nearer and nearer to closing the gap, and a not inconsiderable number even become honor students.

Research initiated six years ago and now available for the entire college career of two complete classes suggests still another use for the entrance battery. We divided each of the classes into three groups by general category of major—social science and humanities, science and math, and professional arts. There were no differences among the major groups as to degree of hearing loss or type of secondary school attended. Others have found that among the hearing, different majors impose different requirements on students; this proved to be equally true for the deaf.

For the social science and humanities group, tests of writing and vocabulary are most predictive of both five-year grade-point average and number of years of college completed. Motivation was not related to grades but was predictive of years completed. Only about 20 percent of the drop-outs in this major group seemed to be associated with academic deficiency.

The grades and retention of science and math majors, perhaps surprisingly, were best measured by verbal tests—vocabulary, writing and grammar, not by tests of mathematical skills. This is less paradoxical than it might appear. It results from the fact that nearly all math and science majors have a level of facility in mathematics more than adequate to meet the requirements of the major. If self-selection worked less efficiently, mathematical skills would become more important. More than a third of the science drop-outs are related to academic deficiency.

The professional studies curricula are by large the least demanding of the various majors. But even though a lower level of academic skills is required by the professional majors, again it is verbal skills—writing, reading and vocabulary—which best predict grade-point average. Only motivation predicts the number of years completed, suggesting that most students electing these majors have adequate skills to obtain degrees if they choose to exert themselves.

From these differences in requirements for the various majors, it is clear that the entrance battery could be used as an effective adjunct in guiding students to elect majors in which they are likely to be successful.

A final parenthetical observation: as a by-product of our continuing research in the correlates of academic success, we have unearthed some answers to the perennial questions about hearing loss and type of secondary schools attended. It has been commonly accepted that if the hard of hearing were in academic competition with the profoundly deaf, the former would take all the academic honors. As it turns out, this belief is utter myth; the correlation between hearing loss and grade point average was less than .10 in both classes. The same is true of the relationship between hearing loss and number of years completed. This means quite simply that success at Gallaudet is independent of degree of deafness.

Furthermore, there is a very low correlation between attendance at residential schools and either of the two criteria. Students who received their secondary schooling at public high schools and at residential schools do almost equally well in college.

EDUCATIONALLY SIGNIFICANT TRAITS OF NTID STUDENTS*

James R. Titus, M.A. and Barbara M. Hanner, M.S., National Technical Institute for the Deaf

The intent of this paper is to share with you, in a descriptive and informational manner, some of the observations that we have made at the National Technical Institute for the Deaf concerning the general learning skills of our students. These observations include many learning traits which are of concern to all of us at all levels of the educational process. By sharing these observations with you, we hope to stimulate and pool our ideas and efforts toward developing strategies which deal with these traits effectively.

Approximately 330 students are currently enrolled at NTID. Students entering NTID typically come with different backgrounds, different communication skills, different levels of educational achievement, different aptitudes and interests as well as different levels of social maturity. While every instructor of the deaf recognizes the extent to which deaf children vary, it comes as a revelation to those of us whose prior experience is with non-handicapped students. Such diversity presents an educational challenge of significant breadth and scope.

In spite of these differences among our students, many instructors seemed to be observing certain traits which were common to many of our students and which were influencing their educational progress.

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*Based on information collected by the NTID Committee on Educationally-Significant Traits of Post-Secondary Students: Joseph Badamy, Herbert Berry, Valerie Consaul, Thomas Rucker, E. Ross Stuckless, Jonona Young.

During the spring of 1970, a committee of NTID research and instructional staff members was formed to coordinate the identification of those traits of NTID students which seem to contribute to or detract from learning and which a significant number of deaf students share. The identification of these traits was based upon observations made by instructors who have taught post-secondary deaf students for at least one year.

These instructors made 40 different observations. From these 40 observations, 20 were identified as traits that are descriptive of a significant number of students at NTID. It is not appropriate in this paper to describe the details of how we established the significance of these traits but, stated very briefly, we designed a percentage scale for instructors to use to estimate the prevalence of each trait. The 20 traits were organized under four general categories:

1. Reading and Writing Abilities
2. Knowledge of Facts
3. Information Processing
4. General Approach to Studies

For the most part, these observations emphasize the learning difficulties rather than the learning successes of our students. They are not all descriptive of every student although all students can be described by at least some of them. They are also not descriptive only of deaf students—admittedly, they are also true of many hearing students. In any case, the identification of these learning traits is an important, initial stage in attempting to develop instructional techniques which take these traits into account.

READING AND WRITING ABILITIES

The observations involving "Reading and Writing Abilities" include many of the same observations which have been identified repeatedly by most educators of the deaf. When our students enter NTID, they have many reading and writing problems. For example, their vocabulary level is low. They have problems understanding and correctly using many very basic words as well as the more technical terms introduced in most courses. For the most part, our students have difficulty deriving the meaning of a word or phrase from its context. Consequently, idioms and words with multiple meanings are particularly troublesome for them to comprehend and use appropriately.

Related to this deficiency in reading vocabulary, our stndents tend to have a great deal of difficulty extracting information from what they read. For example, they cannot with ease organize information from the reading in terms of main and secondary facts or in terms of principles and examples. Many seem to be unable to judge what is important information and what is not. This often results in futile attempts to memorize everything, but in so doing, they are nonselective in deciding what should be retained. According to many instructors, the students like anecdotal examples and illustrations and they often recall these examples at exam time. But they frequently forget the principle that the example illustrates. Thus, we have found that there is a need to spend more time demonstrating and emphasizing the relationship between the principle and its examples. At the same time, additional training and practice in outlining, summarizing and precise writing may play a valuable role in remediating the difficulty that they seem to have in extracting important information from the material being read.

An illustration may be helpful at this point to describe another reading problem that is typical of so many of our students. Several instructors noted that their deaf students frequently skipped words on tests—important words which provide contextual clues for finding the correct answers. For example, on a relatively simple reading comprehension task, the following question was asked: "Hubert was a wandering ________."

The answer was "Hubert was a wandering *hippo.*" But answers frequently given by deaf students included "Hubert was a wandering in the South," or "Hubert was a wandering in South Africa." Evidently, these students were overlooking the article "a". Since "a" is an article, it demands a noun—not a prepositional phrase! Most instructors agreed that their students tend to read questions without adequate attention to, and awareness of, the importance of syntax.

Deaf students entering NTID typically use inefficient and inappropriate approaches in reading. They do not spend enough time carefully reading that material which requires *careful* reading, such as the instructions and questions on an exam. Yet many of them consume much time reading, rereading and reading again the same page of their textbook before turning a page. As a result of this tedious reading style, they tend to fail to integrate various parts of a chapter or an article. They do not quickly preview the headings in a chapter but instead typically bulldoze into the assigned task without knowing *what they are really doing* and *where they are going.* In general, they have difficulty in adapting their reading style to the particular purpose for reading and the content being read. They just do not seem to know when it is appropriate to scan or skim and when it is not.

In terms of writing skills, their paraphrasing abilities are generally quite poor—they have difficulty translating what they have read into their own words. But if they do not comprehend what they are reading, how can we realistically expect them to be able to paraphrase what they have read. Many also have trouble preparing reports and papers which require the expression of creative and original ideas.

KNOWLEDGE OF FACTS

In view of the previous discussion concerning the reading and writing deficiencies of the students observed one would expect to find related deficiencies in the students' general knowledge of facts. In the classroom, a large percentage of our students exhibit serious factual knowledge problems. This trait is not confined to one subject area, but seems to be a general problem encountered irrespective of whether the student is studying science, English or mathematics. Such deficiencies may be directly related to the students' difficulty in identifying primary and secondary points, whether in reading or direct classroom instruction.

Students also exhibit a general lack of knowledge of facts about life outside the classroom. Many students seem to lack an awareness of contemporary problems and their significance. In an effort to make course material relevant and clear to students, instructors try to relate course content to current developments in the world. Such attempts are often met with blank stares because the student has no knowledge of the event to which the instructor is referring. Thus, relating course content to current events seems only to add to the confusion rather than clarifying information.

The students' perception of the world of work is often vague or poorly defined. Evidently, these students do not clearly understand the prerequisites for various vocations. Often students with no mathematics beyond the Algebra I level come to NTID with the intent of pursuing a mathematics major. This is not a very realistic self-appraisal in view of the rigors of such a major. Very often they have very little knowledge of the requisites of such a program or indeed what an individual might do once he had completed such a program. The poor factual base is but a symptom of the students' general lack of sophistication about career information, career planning and career decision-making.

INFORMATION PROCESSING

These observations refer to traits which depict how we gain information. Here, the emphasis is on "how" and not "what" we learn. For the most part, our students have many difficulties in this area. Most NTID students use very ineffective learning, study and review techniques. They spend most of their time and effort attempting to memorize a great number of facts without comprehending what these facts really mean and how they relate to each other. For example, an instructor in the Math Department noted that his students, after learning a certain operation, tend to apply this operation mechanically without understanding how or why it works. According to this instructor, some students are not aware of logical thinking as a component of mathematics. Unfortunately, many of these students are unable to go beyond this method of simple rote learning with the consequence that they do not acquire depth of understanding. It is not surprising that many of these students are unable to apply information learned in one context to other appropriate situations or problems. We cannot expect these students to be able to apply or generalize information which they really do not understand. By the same token, some students have trouble determining exceptions to principles—they cannot discern when a general rule does not apply to a particular situation or problem. In summary, many of our students experience problems in generalizing from and discriminating between information.

In addition, many of our students seem to be unable to manipulate and relate abstract information to reach a reasonable conclusion. For example, many students at NTID are unable to adequately answer "if-then" questions, questions asking "why" and "how" and the total concept of cause and effect seems to elude them.

Students entering NTID are also often unable to form alternative ways for solving a particular problem. For example, two students participating in our Coop Program, failed to arrive at work one day.

When asked what caused their absence, they explained that the buses were on strike and therefore, they had no transportation to work. However, when they were asked if they had considered taking a taxi or asking a friend to drive them, they admitted that they had not attempted to think of alternative ways of getting to work. This example demonstrates the frequent rigidity in thinking of many of our students. If their first method of solving a particular problem fails, they are inclined not to attempt to think of alternative methods.

This whole area of information processing, problem-solving and decision-making is one area where much work is needed to develop programs oriented toward improving our students' creative and critical thinking skills. One of the main causes of poor thinking skills is probably the lack of experience or opportunity to use and practice higher level thinking tasks. Perhaps we attach too much emphasis on acquiring specific facts, with our students, with too little emphasis on acquiring higher level cognitive skills. We must develop programs which encourage students to make meaningful decisions; programs which encourage students to analyze problems carefully; programs which encourage students to explore concepts in greater depth; programs which encourage students to use higher level thinking skills.

General Approaches to Studies

We often look at specific skills that students should have for success in post-secondary work. We can evaluate such skills and often make reasonable predictions and prescriptions for specific students. These skills are measurable and relatively easy to identify. There are, however, a number of characteristics that instructors observed which do not fall into the category of skills. They nevertheless have profound impact on our students. These observations can be summarized as suggesting that many of our students lack sophistication concerning the world about them, of people, places and things. As a corollary to this, some students lack a clear understanding of themselves in relation to others.

The manifestations of the above generalities can be seen as the students involve themselves in the classroom. A large percentage of our students do not have a full awareness of the effort and learning strategies that are required to be successful in post-secondary studies. Often the student over-rates his present ability and feels that he can handle more advanced work than he is indeed capable of at this point. Many of our students frequently try to move through a course too hastily. These students usually complain that they were required to take a particular course in high school and therefore they should not be required to take it again, when in fact they show little understanding of the material. Many of our students also demonstrate little independence in gathering information and solving problems themselves. Instead, they seek and depend on the assistance of the instructor. These traits are present in varying degrees in NTID students, but they do point to a general lack of knowledge about the post-secondary academic world and what is expected of them in it. Unfortunately, this failure to appreciate the demands of post-secondary studies can lead to frustration for the student.

Conclusion

The identification of the learning skills and the learning difficulties of our students is only the first step in the development of new instructional techniques. It is an important step, but more important is the development of new programs which deal with these skills and difficulties more effectively.

Members of the Research Department at NTID have prepared a three-part program for the new students entering NTID this summer. This program will supplement the Vestibule and Sampling Programs. This research program will include three two-week programs. One program will involve a two-week concentration on reading and study skills. Robinson's [1] SQ3R (Survey-question-read-recite-review) approach will be used as the basis of this program. The emphasis will be on learning an effective technique for reading and studying textbook material.

The second program will involve a two-week concentration on the importance of "vocational decision-making and career planning" and the role of the individual in this process. Here, the emphasis will be on developing an awareness and understanding of the type of vocational questions a student must answer while planning his own future.

The third program will involve a two-week concentration on non-verbal cognitive skills. This program will fulfill diagnostic as well as instructional objectives.

A two-week time interval is a very short amount of time to attempt to accomplish any type of great feat. We hope, however, to show the value of these programs as part of a more extensive program dealing with these problems.

It is important to emphasize that the intent of this paper is expository and informational in nature. We are all concerned about the learning skills of our students and for this reason, we thought it might be valuable to reiterate our specific concerns. Through this reiteration, we hope we might provide others with an awareness that might prove to be beneficial to programming for deaf students of all ages.

COUNSELING THE POST-SECONDARY DEAF STUDENT: IMPLICATIONS FOR ELEMENTARY AND SECONDARY EDUCATION

James L. Collins, Ph. D., National Technical Institute for the Deaf

The title of this paper implies a level and breadth of expertise which its author does not claim. However, I do feel that the three years of experience garnered by the Counseling Staff at the National Technical Institute for the Deaf makes possible some suggestions for both parents and teachers of deaf children at the elementary and secondary school level. This paper will attempt to identify some needs which have been observed in deaf students at the post-secondary level and to suggest certain measures which might be taken with younger students to alleviate these needs.

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[1] Robinson, Francis P. *Effective Study*. Harper & Row, New York, 1970.

When given the opportunity to make suggestions about changing the educational process or content at the elementary and secondary level, it is difficult to resist a shotgun approach which will bring forth all the opinions, concepts and prejudices that the author holds. However, in an attempt to stay within the realm of reasonableness and the competencies of the author, three specific areas will be dealt with today. The remarks in this paper will be aimed at the deaf persons' need: (1) for self-knowledge, (2) for ability to relate to the environment, and (3) to choose a career.

SELF-KNOWLEDGE

A shockingly large number of the deaf students who enroll at the National Technical Institute for the Deaf have little knowledge about their academic capabilities. Many of them do not understand the concept of achievement testing and/or levels of academic achievement. Naturally, these students do not understand their own academic strengths and weaknesses and find it difficult to make appropriate selections of majors which are commensurate with their abilities. In a similar manner, they do not have knowledge of their own specific aptitudes, interests or general mental level. Again, without this kind of information, the student can make appropriate decisions only by chance. Even when the decisions he makes turn out to be correct by chance he is unable to know why they are correct so that a similar procedure can be followed when other decisions are necessary.

The factors mentioned in the previous paragraph related to achievement, aptitudes, interests, and general mental level are certainly important. Every young person has the right to expect information about himself which is gleaned from tests typically given in any school in the United States. However, every young deaf person has the right to expect that another type of information about himself will be made available to him, explained to him, and interpreted to him in a manner which will enhance real self-understanding. I refer here, of course, to information about the person's deafness.

A fair number of our students understand the concept of an audiogram. Not many of them, however, can relate to this in terms of what their own communication skills and abilities are. Going deeper than this, few of our deaf students understand the other significant factors about their handicap. Few of them can discuss intelligently how many deaf people there are in the United States, what the educational level of the deaf population is in general, what kinds of jobs deaf people typically hold, how the social life of a deaf family differs from that of a hearing family, how their parents feel about having a handicapped child and so on, and so on, ad infinitum. I propose that this is indeed a reflection on elementary and secondary education which all of us as educators should be concerned about changing.

It would seem not only highly desirable but absolutely necessary that educational programs for deaf students all over the country begin to provide services which will meet these needs. Interpretation of audiological, psychological and scholastic test results should be available to all deaf students. Individual counseling, group counseling, and seminars are techniques which can be utilized to help deaf students grow in self-knowledge and self-understanding about their deafness, about the effects it has on their life and the lives of others and about the deaf population of which they are a part.

RELATING TO THE ENVIRONMENT

A second characteristic which is noticeable in the students observed at the National Technical Institute for the Deaf is the inability of most of them to relate appropriately to a variety of environments and particularly the people in those environments. As an example of this, I have observed that a large number of the deaf students who have a residential school background tend to resist interaction with hearing people whenever possible. By the same token, students who come from a public school background or from a highly oral background resist for some time (or permanently) identification with other deaf people and tend to avoid, if possible, a great deal of interaction with deaf persons of dissimilar backgrounds. This is a natural phenomenon, of course, when the experiences of the students and human nature are considered. This does not mean, however, that the status quo should be maintained and that the pattern should be allowed to perpetuate itself.

Because a young person is deaf and because certain structured educational guidelines must be invoked, whether the student goes to a residential school or to a public school, the experiences of most of the students are limited to a greater or lesser degree than if they had normal hearing. The contacts with people and situations which they have are restricted and limited because of the educational needs they have. It is not unusual then to find that many of the students have an unrealistic view of how they can or how they should relate to people in a variety of environments. One of the most noticeable outcomes of this is some students' *inflated* opinion of their ability to communicate with society at large and in some students' unrealistically *deflated* concept of their ability to communicate with society at large. In both instances, contact with a larger and more varied environment presents a more realistic picture to the student.

It seems highly desirable that educational programs for deaf students *initiate* programs which will bring the students into greater contact with both hearing and deaf persons. Any means possible should be utilized to accomplish this but examples of this would be to take the students into the community and bring the community to the campus through field visits, and guest speakers. Another valuable technique is providing adult role models who can form informal relationships with the students through a program of evening dormitory visitations, weekend rap sessions and other similar endeavors. The use of good solid role models, i.e., successful deaf adults is utilized infrequently on a national basis. To me, it seems a genuine loss to young deaf people to not be able to have contact with such successful role models.

Another paper is being presented at this convention this week dealing with volunteer work by deaf students at the National Technical Institute for the Deaf. Mr. William Yust, a Counselor in our program conceived this idea and the results are most heartening. A pilot project where a small number of deaf students went into the community to work as volunteers in established agencies has proven to be of immeasurable value to these students. I would suggest that programs of this type could be instituted in many of the educational programs which are responsible for elementary and secondary deaf students. Perhaps it is time for deaf students to start giving Christmas parties for truly underprivileged children rather than being recipients of this annual event themselves.

CAREER CHOICE

A third very important area in which deaf students have a great deal of difficulty is in making appropriate career choices. This is not unusual, of course, when the factors which have been discussed in the preceding sections are considered. This problem is heightened in an institution which offers technical education rather than a liberal arts education. Most liberal arts students are expected to take very similar courses during the first year or so of their education. This is not so in technical fields where students are expected to choose a major very early in their career, sometimes before their actual enrollment in a technical institute. It should also be pointed out that the inability to choose an appropriate career is not limited to deaf students since many hearing students experience similar difficulties. However, this does seem to be heightened in the case of deaf students.

Part of the problem which deaf students face in choosing an appropriate career seems to be related to the more general problem of understanding the reason for choosing any type of life's work. Although I have no data to back this up it is my feeling that perhaps deaf students experience an inordinate difficulty in understanding this concept because of their lack of exposure to adults in a work role, and/or because of the students' insulation from the cause-effect relationship which hearing children learn at a very early age through hearing parental conversations which implicitly state: We have a home, food, car, clothing and other material things because Daddy works.

It is also observed that many of the students choose a career on the basis of what their roommate has advised them to study, because a friend has a particular job in which he is making a good salary, because of the desires of his parents, or the advice of his teachers, and other such factors. Few of the students are able to give a rational basis for the selection of a career based on such factors as interest, aptitude, promotional potential, and so on. It is also noted that very few of the students are able to specify how they should go about preparing for a career that they do select. By that I mean they are not able to specify what type and what level of training will be necessary, what kind of continuing education will be necessary, and where that training can be obtained.

It would seem reasonable that many or all educational facilities for deaf students at the elementary and secondary level could initiate or expand their programs of taking students into the communities to witness a variety of jobs. It also seems most important that included in their course of studies should be a course or seminar devoted to teaching students how to study a variety of careers, how to match their own interests, aptitude and achievement levels with these careers, and instruct how to realistically determine which careers seem appropriate for them.

SUMMARY

I hope that my remarks today will not be misconstrued as a rebuke to the elementary and secondary educational programs for deaf children in this country. Since I have been a classroom teacher in a day class program and a psychologist at a residential school for the deaf, I realize the sincere effort that administrators and teachers in these facilities are making for the better education of deaf children. I also realize some of the constraints under which they are working. However, it does seem imperative to me that attention be given to these three areas I have mentioned if the deaf youth of the nation are to be better prepared to assume their rightful role as technically and socially competent citizens.

Reading and Language—Parnell Hall Auditorium

9:00 a.m.–2:30 p.m.; Kenneth R. Lane, Chairman, American Education Publications, Middletown, Conn.; *Recorders:* Mr. Philip E. Cronlund, American School for the Deaf; Dr. Ben Schowe, Ohio School for the Deaf.

9:00 a.m.–11:45 a.m.; Workshops: "Practical Applications of Linguistics in the Classroom" (Parnell Hall—Section I—Teachers of Children ages 2–10); "*Patterned Language—A Practical Application of Linguistic Principles,*" B. J. Peck, Assistant Superintendent, Oregon School for the Deaf, Salem, Oreg. (Upper School Library—Section J—Teachers of Children—Ages 11–18); "*The Developmental Use of Transformational Grammar,*" James E. McCarr, Language Coordinator, Oregon School for the Deaf, Salem, Oreg.

11:45 a.m.–1:30 p.m.: Lunch.

1:30 p.m.–2:30 p.m.: Wind-up discussion session with both groups—Parnell Hall.

PATTERNED LANGUAGE—A PRACTICAL APPLICATION OF LINGUISTIC PRINCIPLES

B. J. Peck, M.S. Ed., Oregon School for the Deaf

I have long held the opinion that very young children have been deprived of the opportunity to develop an early relationship with our printed word. I am convinced that the deprivation is not due to their inability to cope with it, but rather it has been due to our inability to design and develop adequate programs and techniques that can properly present and help the child utilize that symbol system.

There has also been a lack of research devoted to the task of convincing people that an early relationship with the printed word would be profitable for a child. The research should easily reveal the advantages of such an approach. I am somewhat encouraged by such efforts as Sesame Street, Dr. Seuss materials, and other similar presentations.

PHILOSOPHY

A great amount of effort is expanded by parents, teachers, therapists, and others to assist children to develop good speech and speech reading skills. This of course is based upon our *sound symbol system.* Thus we use our sound symbol system to help our children acquire adequate *spoken* communication skills.

Therefore it stands to reason that if we want our children to have adequate *writing* and *reading* communication skills, we must begin just as early as we do with *sound symbols* and expend just as much time and energy presenting the *printed word symbol*. This applies to handicapped as well as to normal children.

The Patterned Language Program

The Patterned Language program and technique is designed and devoted to help a child, "normal" or "handicapped", acquire a *functional* relationship with the printed word. The program of materials is divided into three units, and each unit is designed to help the child attain specific objectives. All three units are also sequenced and linguistically oriented. Even though all three Patterned Language units are for both "normal" and "handicapped" children, the remainder of this article will apply primarily to the child experiencing *communication dysfunction* due to an unprofitable relationship with our *sound symbol* system.

Developmental and Remedial Approach

Developmentally the Patterned Language program of materials is designed to begin at home with a child as young as 18 months to 2 years of age and continue to assist the student to develop written language skills through the elementary grades then into junior high or high school if necessary. Even though its basic approach is developmental, the original materials were designed to help older children reduce specific written language deficiencies, therefore, it has many remedial strengths also.

Since many children, for one reason or another, have not acquired adequate communication concepts and skills from our spoken word (sound symbol system), some other symbol system must be introduced to attempt to remedy the problem. Very often the child is beyond those critical developmental years (0–6 years of age), thus a very difficult corrective task must begin.

The child must be taken back to the beginning and experience success as he is taken back and guided through those important developmental phases. He must be presented with a remedial program that will allow him, regardless of age, to be successful without having to go back through "baby" materials. A child needing this kind of remedial help can be introduced to Units II or III at any developmental step depending upon his previously acquired communication concepts and skills.

Throughout the three units a child must become physically and mentally involved in the *manipulation* of his own *functional vocabulary*. That mental-physical approach will help satisfy the child's *psychomotor needs*. Those needs may not have been met due to an unsuccessful relationship with the physical experiences involved in the production of sound symbols (speech). Of course it remains to be determined whether or not the motor involvement of manipulating word-cards and writing can substitute for the motor involvement of speaking.

PROGRAM OBJECTIVES

All three units of material work sequentially to help the child acquire basic communication concepts and skills. Through various activities the child will demonstrate that he possesses two basic concepts. The two concepts are that:

1. printed words convey meaning between people.
2. words belong to groups of words.

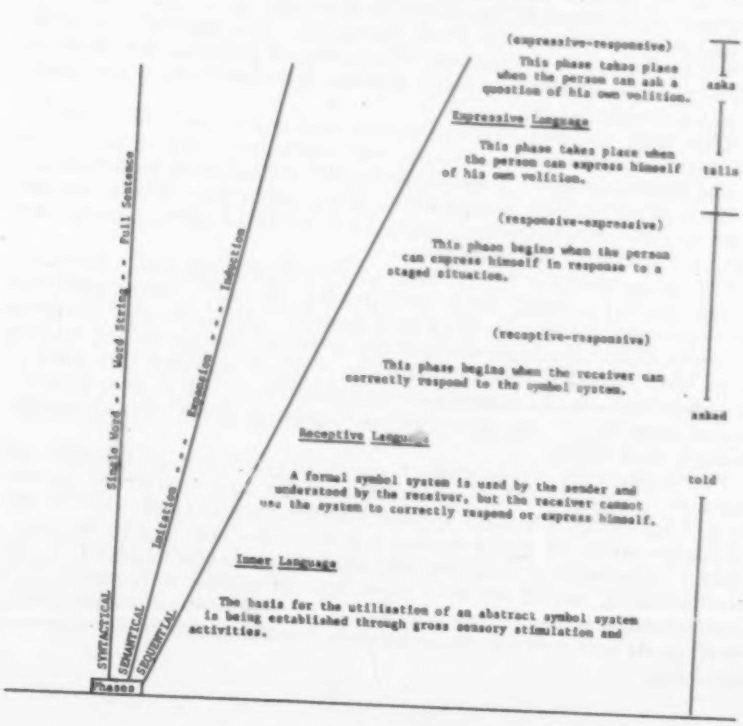
The two skills the child acquires gives him:

1. the ability to use (printed) words to make things happen.
2. the ability to use (printed) words in (one of 4) basic sentence patterns.

PRESENTATION OBJECTIVES

The objective of the remainder of this presentation is to: (1) briefly describe each of the three units of material, (2) list the various phases of language development included in each unit, and (3) explain how the units *incorporate each phase* as they are presently being implemented at the Oregon State School for the Deaf. The phases which will be discussed are illustrated on the Communication Skills Developmental Phases chart (Fig. 1).

Figure 1 - Communication Skills Developmental Phases


(expressive-responsive)
This phase takes place when the person can ask a question of his own volition.
asks
Expressive Language
This phase takes place when the person can express himself of his own volition.
tells
(responsive-expressive)
This phase begins when the person can express himself in response to a staged situation.
(receptive-responsive)
This phase begins when the receiver can correctly respond to the symbol system.
asked
Receptive Langu
A formal symbol system is used by the sender and understood by the receiver, but the receiver cannot use the system to correctly respond or express himself.
told
Inner Language
The basis for the utilization of an abstract symbol system is being established through gross sensory stimulation and activities.
Single Word . . . Word String . . . Full Sentence
Imitation . . . Expansion . . . Induction
SYNTACTICAL
SEMANTICAL
SEQUENTIAL
Phases

UNIT I

Unit description

Unit I is designed to help a child (as young as 18 months to 2 years of age) attach meaning to single printed words and communicate with these words. It begins initially in the home with the mother who follows a step-by-step *illustrated, instructional manual.* If a child's handicap has prevented him from benefiting from our sound symbol system, this unit will help him develop a beginning working vocabulary, and it will help him establish immediate, positive communication with his parents (family), teacher, tutor, etc.

The development of a beginning working vocabulary and the ability to communicate with it is accomplished through the proper use of printed word-cards and two Patterned Language aprons. The word-cards are color-coded to match the color-coding of the apron pockets. The color-coding and apron pockets are used to begin to establish the concepts of word classification (grouping) and correct word order (syntax).

Developmental phases and unit implementation

PHASE I—SINGLE WORD COMMUNICATION

It has been noted that children begin communicating with one word utterances as the first phase of language development (Brown and Bellugi, 1964; Ervin-Tripp, 1966). This first phase is accomplished by children at varying ages.

Since most hearing impaired children cannot or do not acquire the ability to utter one word concepts orally at the usual early age, another symbol which *they can use* must be introduced. That symbol must be introduced to allow them to complete that first phase of language development at as close to the same age as possible.

This first unit helps the child acquire a functional printed-word vocabulary, and allows him to immediately communicate through the use of one-word (holophrastic) concepts. This ability has been demonstrated by 10 deaf children in Oregon who were 18 to 24 months of age. Some of those children's parents are deaf and some are hearing.

Of course, while the child is acquiring his beginning functional vocabulary, other developmental processes are also taking place. When the parent communicates with the child, the receptive, receptive-responsive, and expressive language experiences will be included. Those experiences offer much opportunity for the child to develop imitation and expansion skills.

The instructional manual provides for the early introduction of negative (No) and positive (Yes) concepts. Also on a single word basis the child will be exposed to (receptively) and learn to use (expressively):

1. names of people and pets—Mama, Daddy, Fido, etc.
2. basic desires and activities—want, eat, drink, sleep, etc.
3. names of objects (things) - cookie, juice, bed, etc.
4. where concepts—bye-bye, bathroom, outside, etc.
5. time concepts (relative)—afterwhile, before, etc.

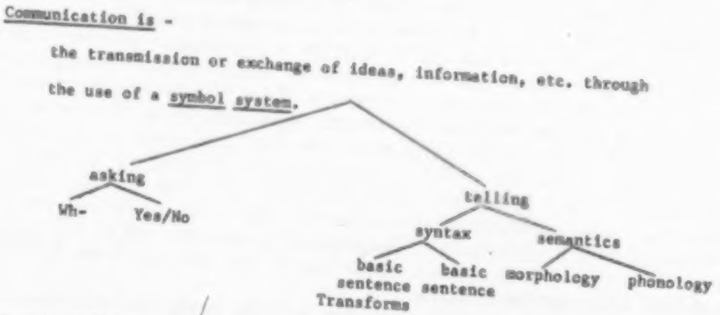
The child acquires the ability to use these word-concepts while he is involved in the communication process. This communication revolves around natural language learning situations which exist in his everyday environment rather than from rote or stilted activities. The topics of communication *must* center around the people, pets, activities, objects, and places which are important (relevant) to the child. This of course provides the child with immediate pay-offs and increases his desire to communicate. To increase the chances of this atmosphere being created at home, the parent is told that her objectives are to:

1. Communicate!
2. Make communication fun and simple.
3. Make communication rewarding and personally satisfying to the child.
4. Get *all* family members into the act.
5. Build communication around people, pets, activities, and things that are important (relevant) to the child.
6. Do not strive to develop a large vocabulary just for the sake of a large vocabulary. It should grow as the *child has need to communicate.*

Parents are also encouraged to continue to work on oral skills as diligently as ever, and most have reported an increase in the child's desire to vocalize and talk.

Proper utilization of this first unit will also permit the introduction of the *question* concept. Since all communication revolves around the *telling* or *asking* process, the hearing impaired child must acquire the ability to distinguish between and successfully use both processes (Fig. 2). This must occur as nearly as possible to the same age as for normal children. If the hearing impaired child is going to benefit fully from his total educational environment, he must be able to recognize a question, properly answer it, and ask a question when he is inquisitive.

Figure 2 - Communication Binary


Communication is -
the transmission or exchange of ideas, information, etc. through the use of a symbol system.
asking
Wh-
Yes/No
telling
syntax
semantics
basic sentence Transforms
basic sentence
morphology
phonology

Unit II

Unit description

After the child has *attached meaning* to the printed word (cards), has a *beginning working vocabulary* of approximately 6 to 12 words, and is *communicating* with those words, he is ready to begin working with Unit II. The child continues to work with Unit I to acquire new word-concepts but gradually begins to work toward the objectives of Unit II.

The main objective of Unit II is to help the child who has a beginning working vocabulary to begin putting those words together in their proper order (syntax) and relationship (semantics). A secondary objective is to begin introducing the *four basic sentence patterns* around which the remaining materials revolve.

After each new word is introduced to the child through Unit I and acquired by him, the color-coded cards are placed in color-coded card files. The card files sit in a metal tray in front of and below a slot chart. This arrangement permits the parent, teacher, or tutor and the child to build sentences 1 word at a time from the card files to the slots above. The individual card files provide maximum flexibility so any sentence pattern desired can be generated.

Very shortly after the child begins to properly utilize the Patterned Language Slot Chart, he is introduced to his own small color-coded Word-tray. The Word-tray permits the child to begin using his small word-cards from his language apron to build syntactical word strings.

Developmental phases and unit implementation

PHASE II—WORD STRINGS AND SYNTACTIC CONSTRUCTION

This second phase begins when the normal child starts to communicate orally by stringing two words together (Braine, 1963; Brown and Bellugi, 1964; Miller and Ervin, 1964). This quickly grows to three, then four, word-strings (McCarthy, 1954).

Thus far hearing impaired children have demonstrated the same level of ability with printed word cards at the same ages through proper utilization of this second unit of material in the home. The parents whose children were 2½ to 4 years old had little difficulty helping their children acquire the ability to generate word strings using 2, 3, and 4 words. This skill developed very normally as the child had need to communicate. The flexibility of the materials also permitted the parent to work with *expansion* activities during this early developmental period.

PHASE III—GENERATION OF THREE, FOUR, AND FIVE WORD SENTENCES

The normal child's average sentence length remains at 4 words until shortly before school age at which time he increases it to 4½ words. At approximately school age, the average sentence length increases to about 5 words (McCarthy, 1954).

When the hearing impaired child enters school at age 4 he continues to work and communicate at whatever level he has achieved at home through the manipulation of word-cards. The flexibility of this second unit, as mentioned before, eventually permits the teacher then the child to work with sentence and semantic *expansion* skills to any degree of difficulty.

Last year (1969–70), at age 4, some of the children began to voluntarily write the words that were on their own small word-cards. This began as a form of imitation as they began tracing over the letters on the cards. As a result of this continued desire on the children's part, this year (1970–71) 8 of the 24 four-year-olds are writing some and two of them are writing all of their functional vocabulary. Fourteen, however, have not developed the desire or ability. Of the 32 five-year-olds who began writing last year at age 4, 16 write most and 16 write all of their functional vocabulary. All of this has resulted from the children's desire to write rather than from a formalized, systematic attempt to get them to write.

PHASE IV—GENERATION OF SENTENCE TRANSFORMS FROM BASIE SENTENCE PATTERNS

The normal child on the average begins to ask questions at 3 years of age (Piaget, 1926)—probably to get attention. It is some time later that he really begins to fully understand the question concept. This is very likely the first time the child uses a sentence transform. However, this might be rivaled by his use of the negative transform (No!) as a result of a negative environment.

The flexibility of this second unit, the word-cards and card files, permits the teacher to begin laying ground work for sentence transforms. This of course includes continued work with the question form through the manipulation of word-cards and card files. The teacher begins receptively to work with sentence transforms and continues to build them around everyday activities. Gradually the child is expected to become more involved responsively then expressively in the communication process through the use of more difficult sentence patterns.

UNIT III

Unit description

Unit III depends upon the child having the ability to write, so as soon as the child can write *most* of his working vocabulary in Units I and II, he is ready for Unit III materials. Its primary objective is to help the child write his functional vocabulary in 1 of 4 basic sentence patterns syntactically correct.

This third unit is built around a wall chart that hangs above the blackboard. The chart is divided into eight *sentence areas:*

1. Sentence Transforms
2. Subject + Modifiers
3. Verb + Direct Modifiers
4. Object + Modifiers
5. Where
6. When
7. Conjunction
8. End of Sentence Punctuation

Each area has 1 to 3 sections that hang from a "v" shaped rail. The various sections are places in different arrangements along the rail to construct basic sentence patterns. From the basic sentence patterns the various sentence transforms are generated by using the Sentence Transforms section.

In the beginning the wall chart sections are positioned to correspond with the card files in Unit II so basic sentence patterns can be consistently presented. Then the child is gradually weaned from the Slot Chart (Unit II) to this third unit. This structured approach helps the child to build confidence through consistency. After the child has developed the necessary confidence, the teacher will begin to help him reposition specific sections of the chart to generate sentence transforms. This is a "flexibility" factor important for the development of natural written language, presented within a structured approach necessary for the child to gain self confidence.

The wall chart and supportive materials are also designed to help the child develop *self-monitoring skills*. A child who has not or cannot depend on sound symbols for self-monitoring (preventive, correcting, alerting) purposes, must be given other cues that will help him acquire those necessary skills. It is ego deflating to constantly have to ask if something he has written is correct or incorrect.

PHASE V—ACQUISITION OF WRITTEN LANGUAGE SKILLS

The normal child, shortly after entering school, will begin to acquire the ability to transfer his sound symbol system to the printed word. For some this is a trying experience. The process begins with a formal program to help the child acquire the ability to write the alphabet then later construct single words. As soon as those skills are acquired he begins to write 2, 3, 4, etc. word basic sentences. This of course is followed, after a period of time, by more complex sentences involving compound and transformational sentence constructions.

Since the hearing impaired child is already writing most or all of his functional vocabulary from memory at age 5, it is not necessary to formally teach the alphabet or writing skills when he enters the first grade (age 6). The process becomes one of increasing his written vocabulary, sentence length, and his ability to generate more sentence transforms. As sentence length increases the problem of individual word and sentence semantics also increases.

CONCLUSIONS

Following an applied research approach, the three units of the Patterned Language Program were implemented over a 3-year period of time. Three years ago (1968–69) Unit III was fully implemented and the second unit was introduced later in the year. Unit II was fully implemented two years ago and the first unit was introduced during the last six weeks of school. This past school year (1970–71) Unit I was utilized throughout the total Preschool Department (school and dormitory). Also the first and second units have been used in homes by approximately 40 parents over the past 1½ to 2 years respectively.

During this third year, as previously planned, an attempt was made to evaluate student performance. Since no standardized tests are available to measure student verbal performance before writing skills are acquired, individual student performances were recorded by each teacher. They evaluated each child's performance based upon the Communication Skills Checklist for the Patterned Language Program. The older students in the Intermediate and High School departments were given Dr. Ross Stuckless' PLAID test in May, 1971.

The following information shows the results of the student performance evaluation as outlined in the above paragraph. The first information comes from the Communication Skills Checklist completed on 25 first-year (age 4) and 32 second-year (age 5) children (Fig. 3).

Figure 3 - Communication Skills Checklist
for
Patterned Language

A. Communication Skills

This child:

1st yr.		2nd yr.		
Yes	No	Yes	No	
23	2	32	0	1. has attached meaning to printed word-concepts and discriminates between them.
22	3	32	0	2. has demonstrated an understanding that printed word-concepts convey meaning between himself and others.
24	1	32	0	3. has demonstrated an ability to group words based upon the color-coding system.
18	7	28	4	4. has demonstrated an ability to manipulate his environment through the use of printed word-concepts.
19	6	32	0	5. has demonstrated an ability to use word-concepts together to build 2, 3, 4, etc. word-strings.

B. Skills Achievement Level

1st yr.	2nd yr.	
		1. This child has demonstrated a functional printed word vocabulary of approximately:
37.83 mean # 4-76 range	79.38 mean # 3-200 range	a. receptive-responsive vocabulary (has attached meaning to and responds appropriately but does not use expressively)
16.83 mean # 2-50 range	38.25 mean # 3-130 range	b. expressive vocabulary (has attached meaning to and uses on his own - without cues of assistance)
54.67 mean # 6-115 range	117.63 mean # 3-215 range	c. receptive + expressive (functional vocabulary limitation)

2. This child can generate word-strings using:

1st Year: 4 (0), 1 (2), 16 (3), 3 (4), 0 (5), or 0 (more than 5) word-concepts.

2nd Year: __(0), 3 (2), 5 (3), 7 (4), 9 (5), or 7 (more than 5) word-concepts.

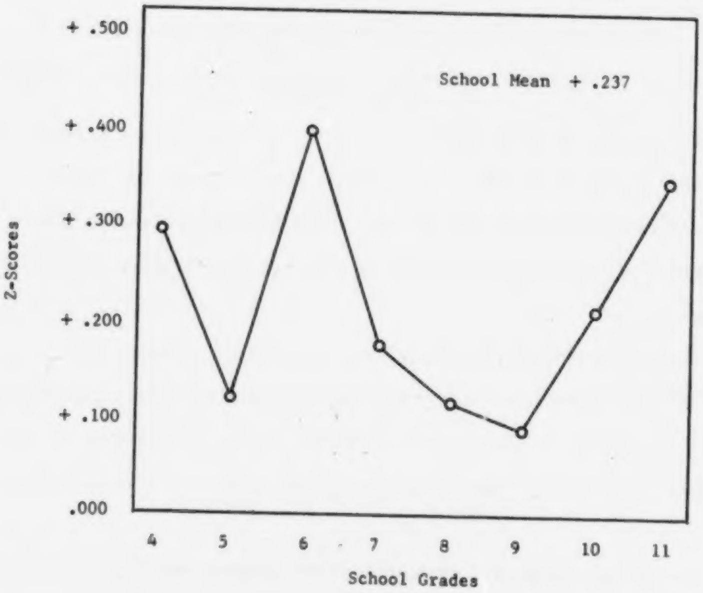
3. This child can write:

1st Year: 14 none, 8 some, or 2 all of his functional vocabulary.

2nd Year: __none, 16 some, or 16 all of his functional vocabulary.

The second information is from the PLAID test which was administered to 110 students in May, 1971. The over-all results showed them performing above the nation norm (Z-Score +.237). The test was administered under the supervision of Mr. Jim McCarr, the language coordinator, and computations were completed by a psycholinguist, George S. Allen, Ph.D. More detailed information has been charted for your perusal (Fig. 4).

Additional funds are being sought for the purpose of devising a more accurate individual student evaluation instrument. Also the Communication Skills Checklist will be revised and up-dated. If these two objectives are achieved the Patterned Language Program will be more thoroughly and accurately evaluated and compared with language programs at other schools for hearing impaired children.



The written Language Test (Stuckless and Marks, 1966) Z-Scores are plotted for each school grade. N-110.

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THE DEVELOPMENTAL USE OF TRANSFORMATIONAL GRAMMAR

James E. McCarr, teacher - language coordinator, Oregon School for the Deaf

The purpose of this presentation is to present to you, teachers of the deaf, a practical method for teaching deaf students the syntax of some difficult linguistic structures. This method is oriented toward the syntax of grammar and is based on principles of transformational grammar.

Chomsky[1] provided the theory for a generative grammar, and Roberts[2] popularized the theory for the classroom teacher. The method presented here is an application of Roberts to the instruction of deaf students by using his transformational principles in a developmental way.

One of the advantages transformational grammar has over traditional grammar is that its rules are more stable. This is particularly helpful to the deaf student who need not be concerned with learning a list of exceptions after mastering the rules. The student can also use these rules as monitors for his own self correction.

Most textbooks employing the principles of transformational grammar presuppose that the students have already assimilated the syntactic code of our language, and so their primary objective is to give the student a deeper understanding of a language that he can already manipulate with a certain amount of competency. The method described below is essentially different from these textbooks in that it presupposes that the student is unable to generate, orally or in written form, the syntactic structures being taught. The only entry behavior required of the learner is that he must be able to generate kernel sentences (i.e., simple sentences devoid of transforms).[3]

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[1] Chomsky, Noam. Aspects of the Theory of Syntax, MIT Press, 1965.
[2] Roberts, Paul. Modern Grammar, Harcourt, Brace, & World, 1967.

Because the developmental approach to the use of transformational grammar is not widespread, there is no research data known to me that supports or discourages the use of this method. Thus any burden of proof must rest on its actual use in the classroom and on the resulting performance of the students themselves. During the past three years I have been using this method with my intermediate classes (grades 5 through 8) at the Oregon State School for the Deaf and have found that it enables the students to grasp the syntactic code of previously troublesome linguistic structures.

Linguists theorize that a person has a built-in language decoder (Language Acquisition Device) that somehow allows him to unravel the syntactic codes of a language. This LAD operates without the conscious effort of the individual during his early years of life. Sometime, perhaps at the approach of puberty, the LAD ceases to function without conscious effort, and from this point on the learner must make an effort to decode syntax.

Repetitious exposure to transformational rules of grammar seem to facilitate the deaf student's LAD in assimilating the syntactic code of various linguistic structures. For example, a student seeking information might incorrectly write: "When the boys went." This student understands the "essence of question" (i.e., that a syntactic form other than a declarative one is used to obtain unknown information); but he is unable to use that form correctly, and this could easily result in ambiguity. What the student is trying to say is: "When did the boys go?" The underlying structure of the question he wants to use is exposed through a transformational method beginning with the base kernel structure: The boys went sometime. "Sometime," an indefinite pronoun is the symbol for the unknown element that the student wants to have clarified. From a basic kernel sentence like this, the following steps must always occur to attain the resulting question:

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[3] For a method of developing basic kernel sentences, c.f. Peck's Patterned Language

kernel base	a. The boys went sometime.
T-do	b. The boys did go sometime.
T-yes/no	c. Did the boys go sometime?
T-wh	d. When did the boys go?

When a student is required to write out the above steps of a question's development, a marvelous, inexplicable phenomenon unfolds. Gradually, as the student's exposure to these steps increases, he asks if he can skip one or two of the steps; and, eventually, the teacher happily notices that the student is writing syntactically correct interrogative sentences in his original, creative writing.

Using this transformational approach enables a student to see the "deep" structure of syntax, and gradually his Language Acquisition Device seems to assimilate the syntactic code of various linguistic structures which then begin to appear in his spontaneous written work such as letters to his parents and in his compositions.

The following transformational steps are offered as a suggested method for teaching deaf students these linguistic structures: interrogative sentences, relative clauses, participle phrases, indirect discourse, and the passive voice. It is hoped that you might find them helpful in the classroom and that your students' performance might prove their value.[4]

Question Forms

Objective #1: The learner will transform declarative sentences (present and past progressive tense) into yes/no questions.

Step: A. Write a simple declarative sentence in the present and/or past progressive tense, and have the learner identify the "helping word" ("be" + "ing" or auxiliary word).

e.g., The boys are studying.

B. Have the learner:

1) change the "helping word" to the first position in the sentence;
2) capitalize the first letter of the "helping word";
3) de-capitalize the first letter of the former first word;

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[4] The procedures that follow are excerpts from a teacher's manual soon to be published by the author.

4) change the period to a question mark.

e.g., The boys are studying.

Are the boys studying?

N.B., Throughout the unit on questions, whenever the learner is able to write a question form correctly, require the learner to give an appropriate answer to the question. e.g., If the question is: Are the boys studying?, require an answer like, Yes!, No!, Yes, the boys are studying., or No, the boys are playing.

Objective #2: The learner will transform into yes/no questions declarative sentences that have modals (auxiliary words).

Step: A. Write a simple declarative sentence using a modal, and have the learner identify the modal as a "helping word".

e.g., The girls can play. (The other modals should also be used: will, might, could, etc.)

B. Same as in Objective #1, Step B.

Objective #3: The learner will transform into a yes/no question a declarative sentence that requires a Do-Transform.

Step: A. Write a simple declarative sentence using a past tense, regular verb without a modal.

e.g., The boys walked to school.

B. Ask the learner to identify the "helping word". When the learner states that there is no "helping word," explain that for this kind of sentence one must supply a helping word.

C. Have the learner determine whether the verb is past or present, and then demonstrate that the past tense of a verb is given the "did" (past) form of "do" and that the verb reverts to its simple present form.

e.g., The boys walked to school.

The boys did walk to school.

D. Explain to the learner that "did" now becomes the "helping word", and have the learner follow Step B of Objective #1.

e.g., Did the boys walk to school?

E. Write a simple declarative sentence using a past tense, irregular verb without a modal.

e.g., The girls rode to school.

F. When the learner realizes the need for a "Do-Transform", have the learner determine whether the verb's tense is past or present. Then demonstrate that the past tense of an irregular verb is also given the "did" (past) tense of "do" and that the irregular verb also reverts back to its simple present form.

e.g., The girls rode to school.

The girls did ride to school.

G. Have the learner follow Step B of Objective #1.

e.g., Did the girls ride to school?

H. Write a simple declarative sentence using a third person, singular, present tense form of a verb without any modals.

e.g., John likes candy.

I. When the learner realizes the need for a "Do-Transform", have the learner determine whether the verb's tense is past or present. Then demonstrate that the third person, singular, present tense of the verb is given the "does" form of "do" and the verb reverts to its simple present form.

e.g., John likes candy.
John does like candy.

J. Have the learner follow Step B of Objective #1.

e.g., Does John like candy?

K. Write simple declarative sentences using the first and second singulars and all plurals of the present tense form of verbs without any modals.

e.g., You like ice cream.
We have some ice cream.

L. When the learner realizes the need for a "Do-Transform", have the learner determine whether the verb's tense is past or present. Then demonstrate that these forms of the verb are given the "do" form of "do" and the verb remains in its simple present form.

e.g., You like ice cream.

You do like ice cream.

M. Have the learners follow Step B of Objective #1.

e.g., Do we have some ice cream?

Objective #4: The learner will transform simple declarative sentences with one unknown element into wh-questions.

Step: A. Write a simple declarative using an indefinite pronoun to indicate an unknown person (someone or somebody), place (someplace), thing (something), or time (sometime).

e.g., He saw somebody.
He went someplace.
He saw something.
He went sometime.

B. Have the students:

1) apply the "Do-Transform" (if needed);
2) follow Step B of Objective #1.

e.g., He went someplace.
He did go someplace.
Did he go someplace?

C. Have the students convert the unknown element (indefinite pronoun) into its corresponding interrogative pronoun ("somebody" to "who" or "whom"; "something" to "what"; "someplace" to "where"; "sometime" to "when"). Then have the student transfer the interrogative pronoun to the first position in the sentence.

e.g., Did he go someplace?
where
Where did he go?

The above steps for the question forms are a nuclear outline and include only the basic and most important steps. There are many sub-objectives and class activities that have been omitted because of limitation of space.

Relative Clauses

Objective: The learner will transform two kernel sentences which share one common, noun element into one complex sentence containing a relative clause.

Steps: A. Write two kernel sentences which share a common, noun element.

e.g., The boy ran home.
The boy hit me.

B. Label the top sentence (which will be the independent clause of the final complex sentence) "Matrix" and the lower sentence (which will be the relative clause of the final complex sentence) "Insert".

e.g., Matrix: The boy ran home.
Insert: The boy hit me.

N.B., The choice of labels for the two sentences is immaterial to the main objective and can be left to the individual teacher's discretion.

The ones given are commonly used in a transformational grammar approach; however, any labels that clearly distinguish one sentence from the other could serve the same purpose.

C. Have the learner identify the "same word" (the noun common to both the "Matrix" and "Insert").

e.g., Matrix: The boy ran home.
Insert: The boy hit me.

D. Have the learner always begin writing the "Matrix" and continue through the "same word" and then stop. Have the learner switch to the "Insert" and always begin with the "same word" of the "Insert".

e.g., Matrix: The boy ran home.
Insert: The boy hit me.
Sentence: The boy the boy

E. Have the learner finish writing the rest of the "Insert" always following the original word order of the "Insert".

e.g., Matrix: The boy ran home.
Insert: The boy hit me.
Sentence: The boy the boy hit me

N.B., The procedure of "E" should always be followed regardless of the "same word's" position in the "Insert".

e.g., Matrix: The boy ran home.
Insert: I hit the boy.
Sentence: The boy the boy I hit . . .

F. Have the learner switch back to the "Matrix" and finish writing the "Matrix", if necessary.

e.g., Matrix: The boy ran home.

Insert: The boy hit me.

Sentence: The boy the boy hit me ran home.

N.B., Sometimes "Step F" is not needed because of the position of the "same word" in the "Matrix".

e.g., Matrix: Tom saw the boy.

Insert: The boy hit me.

Sentence: Tom saw the boy the boy hit me.

G. Have the learner delete the second same word and substitute in its place the appropriate relative pronoun.

e.g., Matrix: The boy ran home.

Insert: The boy hit me.

Sentence: The boy ~~the boy~~ hit me ran home.

The boy who hit me ran home.

N.B., When "whom" is the proper choice for a relative pronoun, ask the learner if the "same word" of the "Insert" functions as a subject or an object. When the learner realizes that it functions as an object, demonstrate that the "who" becomes "whom" or that the relative pronoun, "that", can be used regardless of the "same word's" function.

e.g., Matrix: The boy ran home.

Insert: I hit $\overset{\text{(object)}}{\text{the boy}}$.

Sentence: The boy $\overset{\text{(object)}}{\cancel{\text{the boy}}}$ I hit ran home.

The boy whom I hit ran home.

(or) The boy that I hit ran home.

Essentially the same procedure can be followed when the "same word" of the "Insert" functions as an indirect object.

e.g., Matrix: The boy is my friend.

Insert: I gave the boy a gift.

Demonstrate to the learner that the "Insert" is the same as: "I gave a gift to the boy." and that the "to" can go with "the boy" or remain in its position (an acceptable practice).

e.g., Matrix: The boy is my friend.

Insert: I gave ~~the boy~~ a gift. to the boy.

Sentence: The boy to ~~the boy~~ I gave a gift is my friend.

The boy to whom I gave a gift is my friend.

(or) The boy whom I gave a gift to is my friend.

Participle Phrases

(Deletion Transform)

Objective: The learner will delete the proper words from a sentence containing a relative clause so that the resulting sentence will contain a participle phrase or a participle functioning as an adjective.

Step: A. Write a "Matrix" and "Insert". Include in the "Insert" a form of "be" plus a participle followed by a direct object or an adverbial phrase.

e.g., Matrix: The boy is my brother.

Insert: The boy is playing first base.

B. Have the learner follow Steps C through G of the Relative Clause Unit.

e.g., Matrix: The boy is my brother.

Insert: The boy is playing first base.

Sentence: The boy who is playing first base is my brother.

C. Demonstrate to the learner that when the relative clause contains a form of "be" plus an "---ing" word, one may delete the relative pronoun and the form of "be".

e.g., Sentence: The boy who is playing first base is my brother.

Delete: who is

Sentence: The boy playing first base is my brother.

or when using an adverbial phrase following the participle:

Matrix: The dog took my candy.

Insert: The dog is running down the street.

Sentence: The dog that is running down the street took my candy.

Delete: that is

Sentence: The dog running down the street took my candy.

D. Write a "Matrix" and "Insert". Include in the "Insert" a form of "be" plus an adjective or a participle without anything following it.

e.g., Matrix: The dog looked for food.

Insert: The dog was starving.

E. Have the learner perform the tasks of Steps B and C above.

e.g., Matrix: The dog looked for food.

Insert: The dog was starving.

Sentence: The dog that was starving looked for food.

Delete: that was

Sentence: The dog starving looked for food.

F. Demonstrate to the learner that when only one word from the "Insert" follows the "same word", it must be placed before the "same word".

e.g., Sentence: The dog starving looked for food.

The starving dog looked for food.

or, when an adjective follows the "be" word:

Matrix: He has a car.

Insert: The car is expensive.

Sentence: He has a car that is expensive.

Delete: that is

Sentence: He has a car expensive.

He has an expensive car.

N.B., If the learner is capable of writing sentences in the passive voice, sentences of this type may also be used in the "Inserts".

e.g., Matrix: The boy was embarrassed.

Insert: The boy was beaten by the girl.

Sentence: The boy who was beaten by the girl was embarrassed.

Delete: who was

Sentence: The boy beaten by the girl was embarrassed.

(or) Sentence: The man who was convicted went to prison.

Delete: who was

Sentence: The man convicted went to prison.

The convicted man went to prison.

Indirect Discourse

Objective #1: The learner will transform into indirect discourse sentences written in direct discourse and having a verb of the "say" class in the independent clause.

Step: A. Write a sentence in direct discourse. Use a verb of the "say" class (i.e., verbs like: say, yell, shout, exclaim, think, etc.) in the independent clause.

e.g., The girl said, "The boys are playing outside."

B. Have the learner delete the comma, quotation marks, and the capital letter of the quotation's initial word.

e.g., The girl said the boys are playing outside.

C. Have the learner insert "that" in the position formerly held by the comma.

e.g., The girl said that the boys are playing outside.

N.B., After the learner is capable of writing sentences in indirect discourse, demonstrate that the "that" may be omitted.

D. Have the learner change the tense of the dependent verb to agree with the main verb unless semantics dictates otherwise.

e.g., The girl said that the boys were playing outside. (But now they are working in the house as they should be.),

(or) The girl said that the boys are playing outside. (They are still out there playing.)

Objective #2: The learner will transform into indirect discourse sentences written in direct discourse and having a verb of the "ask" class in the independent clause.

Step: A. Write a sentence in indirect discourse. Use a verb of the "ask" class (i.e., ask, wonder) in the independent clause.

e.g., The boy asked Bob, "Where are you going?"

B. Have the learner perform the task of Step B in Objective #1.

e.g., The boy asked Bob where are you going?

C. Ask the learner if what the boy said was a statement or a question. When the learner realizes that the boy asked a question, demonstrate to the learner that because of the main clause, "The boy asked Bob," the whole sentence is now a statement, and the question mark must be changed to a period.

e.g., The boy asked Bob where are you going.

D. Ask the learner if the quote was a "Yes/No" question or a "wh-" question. Demonstrate to the learner that with a "wh-" question:

1) nothing replaces the comma (i.e., "that" is not used);
2) the "wh-" word remains where it is;
3) the "helping word" of the question returns to its kernel sentence position.

e.g., The boy asked Bob where you are going.

If the quote was a "Yes/No" question, demonstrate to the learner that:

1) "if" replaces the comma (not "that")'
2) the "helping word" of the question returns to its kernel sentence position.

e.g., The boy asked Bob, "Are you going?"
The boy asked Bob if you are going.

E. Demonstrate to the learner that any first or second person pronouns that were used in the original question are changed to the appropriate third person pronoun and that the dependent verb is to be changed to maintain agreement with the subject (if necessary).

e.g., The boy asked Bob where he is going.
(or) The boy asked Bob if he is going.

F. Have the learner change the tense of the dependent verb to agree with the main verb unless semantics dictates otherwise.

e.g., The boy asked Bob where he was going.
(or) The boy asked Bob if he was going.

N.B., If the modals, "can" or "will", are used in the original quote, their past tense forms, "could" and "would", are used.

e.g., The boy said, "I can run fast."
The boy said that he could run fast.

Objective #3: The learner will transform into indirect discourse sentences written in direct discourse and having a verb of the "tell" class in the independent clause.

Step: A. Write a sentence in direct discourse. Use a verb of the "tell" class (i.e., tell, order, command, etc.) in the independent clause.

e.g., The teacher told Bill, "Sit down."

B. Have the learner perform the task of Step B in Objective #1.

e.g., The teacher told Bill sit down.

C. Have the learner insert "to" in the position formerly held by the comma.

e.g., The teacher told Bill to sit down.

N.B., When the learner has mastered Step C, demonstrate these alternate ways of transforming verbs of the "tell" class into indirect discourse:

1) Have the learner insert: "that + subject + had + to" between the two clauses.

e.g., The teacher told Bill that he had to sit down.

2) Have the learner insert: "that + subject + must".

e.g., The teacher told Bill that he must sit down.

Passive Voice

Objective: The learner will transform a kernel, declarative sentence in the active voice into the passive voice.

Step: A. Write a kernel, declarative sentence in the active voice. Use a transitive verb in the present or past tense but without a modal ("helping word"). Have the learner identify the subject and the direct object.

e.g., The dog chased the cat.
subject object

B. Have the learner:

1) begin writing with the object;

e.g., The cat

2) determine the tense of the verb (past or present); and supply the corresponding form of "be";

e.g., The cat was

3) add the past participle of the transitive verb;

e.g., The cat was chased

4) add the preposition "by" plus the subject of the active sentence.

e.g., The cat was chased by the dog.

N.B., When the learner demonstrates a sufficient knowledge of the passive transform demonstrate that the prepositional phrase of agency can be deleted.

e.g., The cat was chased.

C. Write a kernel, declarative sentence in the active voice. Use a transitive verb in a progressive tense or with a modal. Have the learner identify the subject and the direct object.

e.g., The dog is chasing the cat.
subject object

(or) The dog will chase the cat.

D. Have the learner:

1) begin writing with the object;

e.g., The cat

2) determine the tense of the verb as being past, present, past progressive, or present progressive;

3) supply the form of "be" that corresponds to the verb's tense; if the sentence has a "helping word", that form of "be" is to be positioned after the helping word;

e.g., The cat is being . . .

(or) The cat will be . . .

4) add the past participle of the verb;

e.g., The cat is being chased . . .

(or) The cat will be chased . . .

5) add "by" plus the subject of the active sentence, if desired.

e.g., The cat is being chased by the dog.

The cat will be chased by the dog.

Admittedly, the above procedures are quite-structured; and although the author does not suggest that this structured method be used exclusively, experience has shown it to be valuable in giving students a basic understanding of syntax. With this tool of syntax the students will become more adept at expressing themselves correctly in their natural, creative language.

It is hoped that teachers of the deaf who have experienced difficulty in teaching these linguistic structures will find this method helpful and beneficial to their students. In the final analysis, however, the decisive evaluation of this developmental use of transformational grammar should rest upon the student's performance.

PANEL DISCUSSION

Philip E. Cronlund and Dr. Ben M. Schowe, Recorders

Following the teacher workshops led by Mr. Peck on the elementary level and Mr. McCarr on the advanced level, participants joined together for a general discussion of the linguistic approach.

Questions regarding the printed input of single words as contrasted with the input of full sentences were discussed. Class size, input reinforcement by other means than printed matter, and the PLAID test of Dr. Ross Stuckless were also topics related to the discussion.

Participants were interested in techniques demonstrated and the software in use. A display of card racks, card stock, and aprons generated many requests for purchase prices and in-service training workshop possibilities.

CONFERENCE OF EXECUTIVES OF AMERICAN SCHOOLS FOR THE DEAF, INC. (CEASD)

PROCEEDINGS OF EXECUTIVE COMMITTEE MEETINGS

MINUTES OF THE MIDWINTER MEETING

White Plains, N.Y., February 10, 11, 12, 1971

I. Call to Order

Dr. Roy M. Stelle, President, called the meeting to order at 9:15 a.m. on Wednesday, February 10, 1971. The following members of the Executive Committee were Present:

Mr. Lloyd Harrison, Missouri School for the Deaf, Fulton.
Mr. William McConnell, Virginia School for the Deaf at Hampton.
Dr. Ben E. Hoffmeyer, American School for the Deaf, West Harford, Conn.
Dr. Ralph Hoag, Rochester School for the Deaf, Rochester, N.Y.
Dr. Doin Hicks, Model Secondary School for the Deaf, Washington, D.C.
Dr. John Harrington, P. S. #158, New York, N.Y.
Sister Nora Letourneau, St. Mary's School for the Deaf, Buffalo, N.Y.

Also present were:

Dr. Howard M. Quigley, Executive Manager, Conference of Executives of American Schools for the Deaf.
Mr. Roy Parks, Arkansas School for the Deaf, Chairman of the Vocational Education Committee
Mr. Melvin Luebke, Mill Neck Manor School for the Deaf, Mill Neck, Long Island, representing Dr. C. Joseph Giangreco, Chairman of the Membership Committee

II. Approval of Minutes of the Executive Committee Meeting—St. Augustine, Fla., April 4, 1970

The question of the method of nominating associate members arose when it was noted on page 7 of the minutes that the person nominating Miss Mattie Lee Box was not given. Neither the President, Executive Manager, nor the Secretary have sufficient information on many of the associate members, especially those nominated from the floor during the regular business meeting of the Conference. Dr. Howard Quigley recommended that the whole procedure be reviewed.

There followed some discussion as to ways and means of eliminating the repetitious printing of much of the same information in the minutes of the Executive Committee meetings and the regular meetings of the Conference. It was stated that the President's report at the annual business meeting summarized the Executive Committee's meetings and reported its decisions to the membership. This report was seen as sufficient information and would eliminate the printing of Executive Committee meeting minutes in the Convention proceedings. Copies of minutes of all Executive Committee meetings would be kept in the office of the Executive Manager.

Dr. Ben Hoffmeyer moved that the Executive Committee report as given by the Secretary at St. Augustine, Florida, be accepted. The motion was passed.

III. Review of the Minutes of the Forty-Second Meeting of the Conference of Executives of American Schools for the Deaf, St. Augustine, Fla, April 5–10, 1970

Since seven other associate members' names appear on pp. 2–3 without a nominator, the Committee requested the Executive Manager through the Membership Committee to try and trace these associate members and who nominated them.

Since the twenty-four page report was just received by the Committee members before the opening of the meeting, they requested that review and approval of the minutes be postponed until they had had time to read them more thoroughly.

The question of reporting meetings was raised. How can more effective editing be done? Who should do it? How can the process be speeded up? Could the Conference use the services of a stenographic reporter at its regular business meetings? After some discussion Dr. Hicks moved that a stenographic reporter be engaged for the business session of the Conference at the Little Rock meeting. The secretary of the Conference will receive his entire report, edit it, and pass the report on to the Conference. The motion was passed.

Mr. Lloyd Harrison was asked to contact Mr. Albert Davis of Jefferson City, Missouri, to see if he would be available for the June meeting. Mr. Davis is the recorder who the Convention of American Instructors of the Deaf employs for its meetings.

IV. Treasurer's Report

Mr. William McConnell, Treasurer of the Conference, called on Dr. Howard Quigley, Executive Manager, to answer any questions pertaining to two financial reports received by the members from his office prior to the meeting.

Dr. Stelle asked if any of the amount shown in the closing bank balance (December 31, 1970)—$19,753.39, was encumbered for any purpose.

Dr. Quigley replied, "No".

Mr. McConnell moved that the Executive Committee accept the report as stated. The motion was passed.

V. Membership Committee

Since many of the questions which would have been raised here were to be part of the later discussion on the revision of the constitution and bylaws of the Conference, the Committee requested that the President ask the Chairman of the Membership Committee to prepare a report for the Little Rock meeting in which the following points would be dealt with:

(a) Need for centralizing membership operations.
(b) Applications backlog—how to prevent?
(c) Use of standard application form.
(d) Method of nominating associate members.
(e) Method of keeping membership files up-to-date.

VI. Educational Media Corporation Report

Dr. Stelle reported very little business at this time. The Wisconsin "Family Circus" program is being produced. The figures are not in as yet on the Montana addition. Dr. Quigley suggested that Dr. Stelle try to get someone to assist him, for there was other work that could be done for the Government, and he realized that making such contacts takes more time than a full-time superintendent of a large school can give to such a project.

VII. Vocational Committee Report

Mr. Roy Parks, Chairman, gave an historical overview of the work of his Committee in its attempts to establish better vocational education opportunities for average and below average deaf students.

A twenty thousand dollar ($20,000.) planning grant to research the needs of the deaf in this area and to make recommendations for meeting these needs had been announced at the Florida meeting. The recommendation coming from this study group was for the establishment of a Comprehensive Vocational Facility to be funded by Congress. Subsequently a bill was drawn up and Mr. Parks reported that Congressman Wilbur Mills was to introduce the bill in the House sometime this week or next. Senator Fullbright would introduce it in the Senate. The bill would be an amendment to the Vocational Rehabilitation Act of 1968 and contains a suggested budget of eighteen million dollars for construction cost over a period of five years.

Mr. Parks distributed copies of the bill and his report to the Committee.

VIII. Conference Meeting in Little Rock

The Executive Committee decided on the following dates for the Conference business meetings:

Friday evening, June 25th—Executive Committee meeting.
Saturday, June 26th (morning and afternoon)—Business meeting.
Saturday evening, June 26th—Conference banquet.
Sunday afternoon, June 27th—Business meeting.

Mr. Roy Parks and Mr. Lloyd Harrison are working on obtaining a speaker for the CEASD banquet.

IX. Awards

The Committee was asked to authorize an award to be presented jointly by the Conference and the Convention of American Instructors of the Deaf to the Federal Government's Media Services and Captioned Films Program. The award was unanimously endorsed.

Dr. Hoag suggested that if we wished any bureau chiefs to be there then individual invitations should be issued.

A discussion of the merit awards given by the Conference then followed. Five hundred four Certificates of Merit have been given since their authorization. However, there is very little information about procedures or criteria for selection of recipients except that contained in minutes of meetings. A motion was made by Dr. Hoffmeyer authorizing the Executive Manager of the Conference to obtain a person to research the procedures for awarding certificates of merit and to document the language, the format, and the criteria for selection of recipients, in addition to compiling a list of those persons having received such awards from the Conference in the past. The motion was passed.

Mr. Lloyd Harrison made a motion that certificates of merit be awarded to Dr. E. B. Boatner and Mr. Virgil E. Epperson on their retirement and be presented to them at the Conference banquet in Little Rock, Arkansas, on Saturday, June 26, 1971. The motion was passed. Dr. Hoffmeyer moved to grant Certificates of Merit to the following superintendents on the written recommendation of their staffs:

Mr. Robert Brown, Mississippi School for the Deaf.
Mr. Roy Parks, Arkansas School for the Deaf.
Mr. Archie Laird, Saskatchewan School for the Deaf—To be presented at Little Rock.

The meeting adjourned at 4:30 p.m.

Thursday, February 11, 1971

The mid-winter meeting of the Executive Committee of the CEASD was reconvened at 9:15 a.m.

X. Revision of Constitution and Bylaws

Dr. Stelle presented his ideas for a restructuring of the Conference by substantially broadening the base of membership in the organization. He read letters of support for this reorganization from members of the Committee not present and from past presidents of the Conference. The Executive Committee endorsed the ideas and the remainder of the day's meeting was given over to the rewording and reworking of a skeleton model of proposed constitutional and bylaw changes which had been prepared by the Executive Manager, to be presented at the Little Rock meeting.

The meeting adjourned at 5:15 p.m.

Friday, February 12, 1971

The mid-winter meeting of the Executive Committee of the CEASD was reconvened at 9:30 a.m.

XI. Interagency Report

Dr. Quigley reported on an Interagency meeting held on January 6, 1971, at the headquarters of the Council for Exceptional Children in Washington, D. C. Mr. Fred Weintraub chaired the meeting. He announced the establishment of an information center which will report all court decisions and legislation on the books pertaining to handicapped children. The center will cover the period from 1890 to present.

Dr. Quigley reported that there is a great deal of activity in the Bureau of Education for the Handicapped in the area of learning disabilities. There is also great concern in Washington over the maze of procedures which often obstruct needed services to children. Some system is needed to help in the business of "child advocacy". We must develop voices to be liaisons between handicapped children and the public arena. Mr. Weintraub announced that funds in 89–313 programs for FY '72 had been frozen. He wanted to wait and see what the language of the law actually was before planning any strategy for legislation. A meeting may be called sometime in March. Dr. Stelle will contact Mr. Weintraub as to the date of the meeting and how the Conference can participate and contribute to it.

The following question was raised by Dr. Quigley: Do we really know how the top key men in Education stand on the education of the deaf? He advocated more contact and sharing with these men.

Dr. Quigley reported that someone representing a Parents' Association should be in this group. He also believes that the Interagency Committee is a very important facet of our operations and that we should participate as fully as possible in any of its meetings. They will support our efforts.

XII. Educational Media Distribution Center Report

Dr. Quigley's report gave us the following highpoints:

1. Registration for use of Media distributed by the Center is now 2,600 groups.
2. Hard look being taken at whole booking process; including person responsible, usage reports, repository areas, evaluations of certain new programs, problems with shipping and maintenance.
3. Investigating possibility of computerization of some of main office operations.
4. Concern expressed at the federal level about the separation of libraries and media centers in schools. These should be brought together as Learning Centers.
5. Distribution of media to other handicapped groups. Gil Delgado would like to keep the identity of the Media Services and Captioned Films (MSCF) program with the education of the deaf where it began.

Dr. Hoag moved that the Executive Manager of the Conference be given authority to negotiate for continuation of the MSCF contract with the Conference for the distribution of media. The motion was passed.

Dr. Quigley reported that a site visit of his operation was made by a Committee from Media Services-Captioned Films Program. The Media Distribution Center received a good report. Dr. Hoffmeyer raised the question as to our need for a full-time Executive Manager. This was discussed but no decision made at this time.

XIII. National Advisory Committee on Education of the Deaf

Dr. Stelle and Dr. Quigley represented the Conference at a meeting held in New Orleans on January 10 and 11, 1971. Dr. Harriet Kopp, as chairman of the group, has made it very clear that her Committee wants to work with all organizations serving the deaf and that they would welcome any suggestions or dialogue with any group. They are trying to set up opportunities at various national meetings for people in the field to air their views to committee members.

XIV. Annals

Dr. Quigley reported that he has been advised by Dr. James Garrett that the fifty thousand dollars ($50,000.) a year of federal monies which has been received for the last five years as partial support for the *Annals* will be cut to twenty-five thousand ($25,000.) next year. Dr. Quigley is looking into other ways of supporting the *Annals*, or ways in which it might become more self-supporting. At the present time the *Annals Directory* costs approximately six dollars ($6.00). (It was felt that the broadened membership base of the Conference might help considerably.) Some concern was voiced about the editorial policy of the *Annals*. It was felt that as a major educational journal in the field of deaf education its editorial policy should remain unbiased and present the opinions of all in an equally unbiased manner.

A discussion of Conference dues followed and it was decided that the following rates be used:

Schools—Sliding scale (same as in the past).
Programs—$35.00 (flat rate).
Associate members—$10.00.

XV. Nominating Committee

The President asked for and received the following suggested list of names for membership on the Nominating Committee:

Dr. Edward Tillinghast
Dr. William McClure
Dr. Hugo Schunhoff
Mr. Lewis Wahl
Miss Audrey Hicks

The meeting adjourned at 11:30 a.m.

Respectfully submitted,

Sister Nora Letourneau, *Secretary.*

MINUTES OF THE MEETING OF THE EXECUTIVE COMMITTEE

Little Rock, Ark., June 25, 1971

The Executive Committee was called to order by President Stelle at 8:15 p.m., meeting at the Sheraton Hotel, Little Rock, Arkansas.

Present were: John Harrington, Lloyd Harrison, Ben Hoffmeyer, Kenneth Huff, William McConnell, Donald Plummer, Stanley Roth, and Howard Quigley.

Absent were: Doin Hicks, Ralph L. Hoag, and Sister Nora Letourneau.

1. President Stelle read a letter from Edward C. Carney, Executive Director of the C.O.S.D., requesting support for C.O.S.D. in the form of a $1,000. membership in the Gold Emblem Club and $200. toward the expense of a reception prior to the 1972 Forum Meeting in Memphis.

It was moved by Lloyd Harrison, seconded by Kenneth Huff, that the Executive Committee recommend to the Conference that $1,000 be approved for COSD Gold Emblem Club Membership, and that $200 be authorized for reception expense, as described. The motion carried.

2. The Executive Secretary read the following recommendation:

"It has become necessary for the national office, until now housed in the same area as the Educational Media Distribution Center, to find other quarters, effective no later than September 1, 1971. In addition, the director of the EMDC is required, after September 1, 1971 to devote 100% of his time to EMDC instead of 70% as he has done the past three years.

"To resolve this I have found quarters in another part of the building we are in that are available, and I have an option to rent the space at about the same amount being paid for the present space. I propose to move all Conference activities to this area as soon as possible after approval by the Committee.

"I further propose that Miss Ferne Davis be offered the position of Administrative Assistant to manage the office, at a salary mutually agreeable.

"Since the resources of the Conference are not yet adequate to support an office with a full time executive manager I propose to retain the title of executive manager on a no-fee basis, and serve the office as a consultant as needed, on my own time. In doing this I would sign checks and other documents requiring the executive manager's signature.

"If the above suggestions can be made effective for the coming year it is likely that other plans may be developed subsequently, leading to employment of a full time executive officer."

It was moved by Kenneth Huff, seconded by William McConnell, that the proposal, as submitted, be recommended to the Conference for approval. Carried.

3. The meeting adjourned at 9:20 p.m.

HOWARD M. QUIGLEY, *Secretary pro tem.*

MINUTES OF THE MEETING OF THE EXECUTIVE COMMITTEE

Little Rock, Ark., June 27, 1971

The meeting of the executive committee of the Conference of Executives of American Schools for the Deaf, Inc., held at the Sheraton Hotel, Little Rock, Arkansas, June 27, 1971, was called to order at 1:00 P. M. by President Roy M. Stelle. The following members of the committee were present:

Roy M. Stelle, New York School for the Deaf, White Plains, N.Y.
John D. Harrington, P. S. #158, New York, N.Y.
Lloyd A. Harrison, Missouri School for the Deaf, Fulton, Mo.
Ben E. Hoffmeyer, American School for the Deaf, West Hartford, Conn.
Kenneth F. Huff, Wisconsin School for the Deaf, Delavan, Wis.
Sister Nora Letourneau, St. Mary's School for the Deaf, Buffalo, N.Y.
William J. McConnell, Virginia School for the Deaf, Hampton, Va.
Stanley D. Roth, Kansas School for the Deaf, Olathe, Kans.
Ralph L. Hoag, Rochester School for the Deaf, Rochester, N.Y.
Donald M. Plummer, Manitoba School for the Deaf, Tuxedo, Manitoba

Absent:

Doin Hicks, Model Secondary School for the Deaf, Washington, D.C.

1. SUPPORT OF ANNALS

After a discussion of the need for Conference support of the *Annals* and the extent of that support, Dr. Ben Hoffmeyer moved to contribute five thousand dollars ($5,000.) from the Conference of Executives treasury to the support of the *Annals* operation. The motion was seconded by Lloyd Harrison and carried.

2. ANNALS SUBSCRIPTION RATE

On a motion by Stanley Roth, seconded by Donald Plummer and passed, the executive committee approved the recommendation made by the Joint Administrative Committee to raise the regular subscription price of the *Annals* to $12.50 effective with Vol. 117.

3. PROPOSED BUDGET FOR FISCAL YEAR 1972

The proposed budget for fiscal year 1972, as reported by the executive secretary was approved on a motion by Lloyd Harrison, seconded by William McConnell.

There being no further business, the meeting adjourned at 1:30 p.m.

Respectfully submitted,

Sister NORA LETOURNEAU, *Secretary.*

PROCEEDINGS OF THE 43D MEETING—CONFERENCE OF EXECUTIVES OF AMERICAN SCHOOLS FOR THE DEAF, INC., LITTLE ROCK, ARK.

June 26–July 1, 1971

I. Call to Order

The first business session of the 43rd regular meeting of the Conference of Executives of American Schools for the Deaf, Inc., was held at the Sheraton Motor Inn on Saturday, June 26, 1971. Dr. Roy M. Stelle, president, called the meeting to order at 9:30 a.m. Thirty-five regular members and twenty-five associate members were in attendance at the opening session.

II. Adoption of Official Agenda

On a motion by Richard K. Lane, seconded by Melvin H. Brasel, and passed, the agenda, as printed and distributed, was adopted as the official agenda of the 43rd regular meeting of the Conference of Executives of American Schools for the Deaf, Inc.

III. Communications

The president read communications from the following:

Mr. R. M. McAdams, Superintendent, Eastern North Carolina School for the Deaf.

Emil S. Ladner, President, Council of Organizations Serving the Deaf.
Clyde Lee and a committee of parents of hearing-impaired children meeting in Little Rock to formally create a national organization.

IV. Introduction of New Heads of Member Schools

The president introduced the following new executive heads of member schools:

Dr. Ben E. Hoffmeyer, Executive Director, American School for the Deaf, West Hartford, Conn.
Dr. Doin Hicks, Director, Model Secondary School for the Deaf, Washington, D.C.
John L. Caple, Superintendent, Georgia School for the Deaf, Cave Spring, Ga.
Richard Flint, Superintendent, Crotched Mountain School for the Deaf, Greenfield, N.H.
Charles R. Henderson, Superintendent, North Carolina School for the Deaf, Morganton, N.C.
Archie G. Stack, Superintendent, Washington State School for the Deaf, Vancouver, Wash.
Frank W. Powell, Head, Educational Division, Pilot School for the Deaf, Callier Hearing and Speech Center, Dallas, Tex.
Miss Helen Page, Acting Principal, P. S. #47, School for the Deaf, New York, N.Y.

V. Approval of New Member Schools

There being no recommendations for approval of new member schools from the membership committee no action was taken at this time.

VI. OFFICIAL PROXIES

On a motion by Melvin H. Brasel, seconded by James A. Little, and passed, the following official proxies were recognized:

Marvin M. Burley for the Eastern North Carolina School for the Deaf.

Hugh Prickett for Mississippi School for the Deaf for the June 27, 1971 meeting.

Leland Clack for the Kendall School for the Deaf for the July 1, 1971, meeting.

VII. APPROVAL OF NEW ASSOCIATE MEMBERS

The following persons were nominated by the administrators indicated for associate membership in the Conference. On a motion by Melvin H. Brasel, seconded by Edward W. Reay, and passed, associate membership was granted to

New associate member	*Nominated by*
1. Lorne M. Johnston, Assistant Deputy Minister, Department of Education, Toronto, Ontario.	Donald Kennedy, Superintendent, Ontario School for the Deaf, Milton, Ontario; Joseph G. Demeza, Superintendent, Ontario School for the Deaf, Belleville, Ontario.
2. Roy A. Wollaston, Assistant Superintendent, Ontario School for the Deaf, Milton, Ontario.	Donald Kennedy, Joseph G. Demeza.
3. Dr. John Darbyshire, Audiological Services Supervisor, Ontario School for the Deaf, Belleville, Ontario.	Donald Kennedy, Joseph G. Demeza.
4. Robert F. Argall, Audiological Services Supervisor, Ontario School for the Deaf, Milton, Ontario.	Donald Kennedy, Joseph G. Demeza.
5. Douglas Wilding, Vice Principal, Ontario School for the Deaf, Milton, Ontario.	Donald Kennedy, Joseph G. Demeza.
6. James Etherington, Vice Principal, Ontario School for the Deaf, Milton, Ontario.	Donald Kennedy, Joseph G. Demeza.
7. James McCulloch, Vice Principal, Ontario School for the Deaf, Milton, Ontario.	Donald Kennedy, Joseph G. Demeza.
8. William A. Williams, Vice Principal, Ontario School for the Deaf, Belleville, Ontario.	Donald Kennedy, Joseph G. Demeza.
9. John A. Hodgson, Vice Principal, Ontario School for the Deaf, Belleville, Ontario.	Donald Kennedy, Joseph G. Demeza.
10. Miss Marjorie Hegle, Vice Principal, Ontario School for the Deaf, Belleville, Ontario.	Donald Kennedy, Joseph G. Demeza.
11. Hugh Prickett, Principal, Mississippi School for the Deaf, Jackson, Miss.	Robert Brown, Superintendent, Mississippi School for the Deaf, Jackson, Miss.
12. Robert Dawson, Principal of Deaf Department, Florida School for the Deaf and the Blind, St. Augustine, Fla.	Dr. William McClure, President, Florida School for the Deaf and the Blind, St. Augustine, Fla.
13. George Monk, State Consultant, State Department of Welfare, Minnesota.	Melvin H. Brasel, Superintendent, Minnesota School for the Deaf, Faribault, Minn.
14. Lawrence Crouse, State Consultant for the Deaf, State Department of Education, Minnesota.	Melvin H. Brasel.
15. Mrs. Lettie L. Bartz, Primary Principal, Nebraska School for the Deaf, Omaha, Nebr.	George H. Thompson, Superintendent, Nebraska School for the Deaf, Omaha, Nebr.

VIII. RECOGNITION OF HONORARY MEMBERS AND GUESTS

President Roy Stelle introduced a special guest to the Conference, Boyce R. Williams, Chief, Communication Disorder Branch of the Rehabilitation Services Administration in the Department of Health, Education and Welfare.

IX. APPROVAL OF MINUTES OF FORTY-SECOND MEETING HELD IN ST. AUGUSTINE, FLA., APRIL 5–10, 1970

On a motion by Kenneth Huff, seconded by Melvin Brasel, and passed, the minutes of the forty-second regular meeting of the Conference of Executives of American Schools for the Deaf held in St. Augustine, Florida, April 5–10, 1970, were approved as printed and distributed to the members.

X. TREASURER'S REPORT

Mr. William J. McConnell submitted the treasurer's report with a special commendation for Dr. Howard Quigley and his entire staff. On a motion by Lloyd Graunke seconded by Joseph Youngs and passed, the report of the treasurer was unanimously accepted. A copy of the treasurer's report covering the period July 1, 1970–June 30, 1971, is contained in these proceedings.

XI. REPORT OF THE MEETINGS OF THE EXECUTIVE COMMITTEE

On a motion by Dr. William McClure, seconded by Dr. Lloyd Graunke, the minutes of the executive committee meetings held at White Plains, New York, February 10–12, 1971, and at Little Rock, Arkansas, June 25, 1971, were approved as circulated and read.

On a motion by Marvin Clatterbuck seconded by Sister Anne Behre, the minutes of the executive committee meeting held at Little Rock, Arkansas, June 25 and 27, 1971, were approved as read.

Complete reports of all of the above meetings are contained in these proceedings.

XII. REPORT OF THE EXECUTIVE MANAGER OF THE CONFERENCE OFFICE

The national office

As most members of the Conference know, the national office of CEASD has shared space with the Educational Media Distribution Center (EMDC) for the past three years. Rental of this space is paid by the National Office, and the personnel services (except for the Executive Manager) and the supplies are all accountable by the National Office. The Executive Manager is a part time employee, since 70% of his time is devoted to management of the Educational Media Distribution Center.

For two main reasons the National Office activities will need to find other quarters not later than July 1, 1971. One reason is that, in line with the original plan that the office would eventually function separately from the EMDC, the time has come to make the move. A second reason is that the EMDC has expanded its activities and requires more space.

Fortunately, space is available in the same building, at a rental cost similar to that paid now. This space is available July 1, and, subject to the approval of the Executive Committee, the move will be made as soon as possible.

The following items are reported briefly:

1. Membership

The change in the membership procedure authorized at St. Augustine has in general been beneficial. I recommend that a set of guidelines from the Executive Committee be provided for the Membership Committee to enable it to develop a systematic procedure for the entire process.

2. Honorary members

Numerous sources have been used to update the list of honorary members. The resulting list is as accurate as current information can make it.

3. ANNALS

A complete report has been presented to the Joint Administrative Committee.

4. Interagency committee

Attached is the report of a meeting January 6, 1971.

5. Compilation of CEASD minutes

As requested by the Executive Committee, a search has been conducted to assemble minutes of past meetings. This search is almost completed. It is hoped that all documents can be located eventually, and a complete file of minutes be established.

6. Newsletter

The need for a newsletter or some form of regularly issued bulletin to the membership grows from day to day. The machinery for interchange of information should be developed, not only to be of service to the membership, but also to provide information to the national office, which is called upon to find answers to all sorts of inquiries. It is recommended that the Executive Committee initiate procedures for developing this publication.

7. Brochure

The brochure designed by the Public Relations Committee has been most useful. However, the supply is low, and the contents of the brochure are by now somewhat outdated. I recommend that a new brochure be prepared and printed as soon as practicable.

8. Certificates of merit

The CEASD-CAID joint certificate of award was presented to 111 persons since our office took over this activity last November. This program began in 1960 and to date 533 certificates have been issued. Forms for making application are available at any time to administrators who request them.

The assistance provided us in the Washington Office by the officers and members is greatly appreciated. We welcome suggestions, and a visit to our office when in Washington.

XIII. Report of the Educational Media Distribution Center (EMDC)

August 31, 1971 marks the close of the fifth year that the Conference has been under contract to the Media Services and Captioned Films Branch of the U. S. Bureau of Education for the Handicapped (MSCF). Negotiations are under way, by authority of the Executive Committee, to continue the contract another year.

On July 8, 1970, and on May 24, 1971 the Center was visited by site teams appointed by MSCF. The purpose of the visits was to obtain first hand information about the operation of the Center and the problems encountered, preliminary to final approval of budget proposals for the ensuing year. Both visits were reported to the chief of MSCF, and both were favorable to the Center's management. A number of recommendations were made. Copies of the reports were supplied to the members of the Executive Committee.

The Center has been requested to assume more and more responsibilities in the MSCF program. These include increased public information activities, surveys of Media materials utilization, reorganization of the distribution and circulation systems for educational and general interest films, evaluation procedures, projections of materials, needs, and a more detailed analysis of target populations. In addition, the Center has served as an information source for many MSCF activities. As reported previously, the Center has the responsibility for all of the MSCF registration process, to determine eligibility for free loan service of media supplied under the program. Finally, the Center manages a number of projects which involve printing of materials and the financing of special committee functions.

As recommended by the MSCF site team report for the July 8, 1970 meeting, an advisory committee to the Center has been appointed. This group met April 16–17, 1971 and again June 8–9, 1971. The members of the committee are Dr. John Nace, Chairman, Margaret Sterck School, Newark, Delaware; James Achtzehn, doctoral student at Syracuse University; Edward Carney, Executive Director of the Council of Organizations Serving the Deaf, Washington; Margaret Kent, Principal, Maryland School for the Deaf; Dr. Clyde Miller, Director of the Instructional Materials Center, Department of Education, State of Ohio, Columbus. The first meeting was devoted primarily to becoming acquainted with the Center's responsibilities, and to organizing for action. The second meeting was devoted to discussion of the role of the Conference in the activities of the EMDC, especially as to the relationships of the EMDC and the profession. One result of the meeting was a letter from the chairman of the committee, sent to all members of the Conference. The committee awaits a communication from MSCF, soon to be made, which will serve as a position paper dealing with the role of the EMDC as envisioned by MSCF, in the light of the increased responsibilities that have been effected.

Financial reports have been supplied the CEASD President each month. He also has been provided a copy of the contract each year. Each member of the Executive Committee is sent a copy of the annual report required by the Internal Revenue Service.

The Media Services and Captioned Films program has developed rapidly in the ten or so years of its existence. Most of the impetus for the program has come from the Washington offices, with cooperation from the field. As the program grows, and is faced with reorganization in some respects, there arises the need to look more closely at the contributions to the program from the field. Items for consideration include:

1. More active participation on the part of school executives. Although it is recognized that administrators of schools for the deaf are burdened with heavy responsibilities, it is hoped that a greater share of the administrators' time can be made available for assessing the Media programs in our schools, and development to the fullest extent of the potential that Media provides in the educational process.
2. Reconsideration, in many instances, of the assignments of film depository managers. Management of a film depository is a much greater responsibility now than it was a few years ago.
3. A reassessment of the role of Media in modern-day educational programs for the deaf. Many schools have set up media centers, with qualified directors, to serve the staff and teachers. Some schools have combined library and media facilities into single resources, to serve as learning centers. Unfortunately, too many schools do not have media departments, and according to reports we have received, much of the equipment and materials supplied by MSCF remains unused.

As reported last year in St. Augustine, the growth of the Center is such that full time is required of the Director. Our proposal for the year beginning September 1, 1971 provides for this.

Finally, although several plans are afoot for expa[illegible] media services into other areas of handicapping conditions, the current outlook is that services for and to the deaf will not be reduced.

XIV. REPORT OF THE EDUCATIONAL MEDIA CORPORATION

Minutes of June 29, 1971 meeting of the board of directors

The Board of Directors of the Educational Media Corporation held its Annual meeting in the Primary Building of the Arkansas School for the Deaf on Tuesday, June 29, 1971, at 10:30 a.m. The following members were present:

Dr. Ralph L. Hoag
Mr. Roy K. Holcomb
Dr. June Miller
Mr. Edward W. Reay
Dr. Stanley D. Roth
Dr. R. M. Stelle
Mr. J. Dean Twining

Dr. Howard M. Quigley was also present.

It was moved and seconded that the reading of the minutes of the last meeting be dispensed with since they had been mailed to all members of the Board. The minutes were approved as submitted.

Mr. Reay submitted the Treasurer's report which was accepted as presented. A copy of this report is attached.

The following is the President's report:

"1. During the year, considerable time was taken to make changes in the Articles of Incorporation to satisfy the Internal Revenue Service as a tax exempt organization. At the time this report is being written, the Amendments to the Articles of Incorporation have been filed with the Recorder of Deeds in Washington, D. C., and we are now awaiting a certified copy from the Recorder of Deeds. When this is received, it will be sent to the Internal Revenue Service in order to show that we have complied with the law. Besides the difficulty of getting all of the affidavits signed, while this was in progress a change was made in the Internal Revenue Service regulations requiring a further change which our attorney was able to handle.

"2. Since the meeting of the members of The Educational Media Corporation in St. Augustine, Florida, on April 7, 1970, the Corporation has handled only two contracts:

	Cost	Contract	Profit
7,000 copies, Montana edition, Caption Film Study Guide	$264	$8,772	$508
1,000 transparencies, Family Circus	1,325	1,750	425
Total			933

"It is obvious that your President does not have the time to promote business for the Corporation, and any suggestions for a solution to this problem will be welcome.

ROY M. STELLE, *President*".

Mr. Twining moved that the Class of 1971 be reelected, with terms terminating in 1974. These members are:

Dr. Doin Hicks
Dr. John D. Harrington
Mr. Roy K. Holcomb
Dr. June Miller
Dr. Stanley D. Roth

This was seconded by Mr. Reay and passed.

It was moved and seconded that the President be authorized to appoint someone to act as an agent for the Corporation to assist the President in soliciting business for the Corporation. This motion was passed. The President was authorized, by a motion duly made and seconded, to have a brochure developed to publicize the Corporation, its purposes and services. This motion was passed.

There being no further business, the meeting was adjourned at 11:15 a.m.

Respectfully submitted,

ROY M. STEELE, *For the Secretary.*

THE EDUCATIONAL MEDIA CORPORATION

STATEMENT OF CONDITION, JUNE 18, 1971

Assets		
Cash in bank	$1, 304. 21	
Funds transferred to the National Office of the Conference of Executives of American Schools for the Deaf	4, 435. 00	
Total assets		$5, 739. 21
Liabilities and Surplus		
Liabilities		
Profit and loss (Dec. 31, 1970)	$5, 740. 21	
Less expenses since Dec. 31, 1969	1. 00	
Total liabilities and surplus	5, 739. 21	

STATEMENT OF INCOME AND EXPENSES

For the Period January 1, 1970 to December 31, 1970

Income:		
Sales—Conference of Executives		$10, 522. 00
Less: Cost of sales		$9, 514. 22
Gross profit		1, 008. 00
Expenses:		
Agent's fees—Roy M. Stelle	$161. 85	
Legal and accounting	41. 00	
Total expenses		202. 85
Net profit for the period		805. 15

XV. REPORT OF THE JOINT ANNALS ADMINISTRATIVE COMMITTEE

Minutes of meeting on June 25, 1971, Little Rock, Ark.

Persons present for this meeting were:

Hugo Schunhoff
Howard M. Quigley
Kenneth R. Mangan
Ben E. Hoffmeyer
William Craig
McCay Vernon
Marvin Clatterbuck
Ferne Davis
John Harrington
Roy M. Stelle
Armin Turechek
William J. McClure
W. Lloyd Graunke
Edward Tillinghast
David M. Denton

Items discussed

I. MR. BOB MAYO PRESENTED HIS PROPOSAL

Discussed two questionnaires designed to show:
  Level of interest.
  Which journals read.
Discussed increase in advertising.
Mentioned increase in number of manuscripts received.
Discussed "right to negotiate".
Discussed going to offset printing.
Discussed providing a direct ad page as a service.

II. REPORT OF CHAIRMAN

"Because of both the physical and fiscal arrangements many of the on-going *Annals* problems come to the immediate attention of the business manager rather than to the editors or the committee chairman. The chairman appreciates the close communication with the business manager and the numerous telephone conferences and joint decisions. Hopefully, this has enabled us to proceed during the past year with a minimum of confusion and delay. While decisions have been made when necessary on immediate problems, they have in no way affected the policies and decisions which are the responsibility of the Joint Committee.

"The changes of the past two or three years in personnel, format and management of the *Annals* have resulted in substantial improvement of our publication. There still remain areas which require close attention and guidance from the Joint Annals Administrative Committee.

"Very serious decisions must be made by the Joint Committee at this meeting in Little Rock. The majority of the issues have been outlined in a May 14 letter from Howard Quigley to each member of the committee, and in a letter from the chairman dated May 28.

"Among the problems to be resolved are:

1. Problems created by the distance between the business office, the principal investigator, the editor(s), the printing consultant, and printers.
2. The more effective use of knowledge, experience, and expertise of the principal investigator of the Directory Issue.
3. Ways to avoid loss or omission of names from the Directory, along with other materials sent by the principal investigator to the printing consultant.
4. Financial considerations.
5. A statement of editorial policy.

"Hopefully, many of these issues will be discussed and recommendations will be made by those involved in different aspects of the *Annals* operation as requested in my letter of May 28.

"During our discussion in Little Rock we must remember that the *Annals* is the oldest educational periodical presently in existence. It is unique in services and in the information it provides. It should contain material at one time or another of interest and acceptable to all of those engaged in the education of the deaf."

WILLIAM J. MCCLURE, *Chairman.*

III. REPORT OF THE EDITOR AND LIST OF MANUSCRIPTS

Discussed change in bibliographic style.
Discussed percentage of manuscripts on increase.

IV. EDITORIAL BOARD

A. Replacement for Dr. Mindel—Dr. Hilde Schlesinger or Dr. David Williams.

B. Replacement for Darrell Rose—Dr. Noel Matkin or Dr. Dick Krug.

C. Replacement for Dr. Stewart—George Propp or Lawrence Newman.

V. ASSOCIATE EDITORS

A. Replacement for Dr. Brill—Richard Thompson or Kenneth Mangan.

B. Dr. Craig to continue as Editor of the Directory Issue.

VI. DR. VERNON TO SUBMIT TO DR. MCCLURE A "STATEMENT OF POLICY" TO BE CIRCULATED TO THE COMMITTEE FOR APPROVAL. THE POLICY STATEMENT TO BE PRINTED IN EVERY ISSUE

VII. DR. VERNON TO DEVELOP A QUESTIONNAIRE TO DETERMINE READER ATTITUDES TOWARD THE ANNALS; EDITORIAL POLICY; ARTICLES; READERSHIPS, ETC.

VIII. ITEMS LISTED IN MEMO OF MAY 28

Literary issue; tips to teachers.

Bringing dormitory counselors into listing and seeking their membership.

Discussion of quarterly rather than bi-monthly issues.

Seeking articles by announcing "theme" in advance.

IX. DIRECTORY ISSUE

Recommended that suggestions be made to the Editor concerning problems with the Directory Issue.

Principal Investigator report.

Recommended that RID and PRWAD state "contact" names be listed and that complete listing be printed if paid for by the organization—based on a per-page cost—that agency furnish lists.

Recommended that state director of rehab be listed (Rehab for Deaf).

Recommended that all programs and services in each state be listed together under that state.

Recommended that speech and hearing agencies be deleted.

Recommended that all CAID members be listed from CAID membership list.

Recommended to continue listing of religious workers.

Recommended that teachers in training be deleted.

X. BUSINESS MANAGER'S REPORT

XI. RECOMMENDATIONS SUBMITTED BY DR. HOWARD QUIGLEY

A. That beginning with Vol. 117 the proposal of the American International Printing Company be accepted, with the proposal from the Port City Press as an alternate. The members of the Committee are urged to study each proposal carefully before arriving at a decision. PASSED.

B. Recommended that the duties of Miss Ferne Davis be changed such that she becomes the coordinator for all issues, working with the editors and printers under the title of Administrative Assistant for the Conference and the Convention. This is to be effective not later than September 1, 1971. It is further recommended that Miss Davis move to the office of the Conference and Convention prior to September 1, 1971. PASSED.

C. Recommended that the Committee recommend to the CEASD that support payments to the *Annals* be resumed. PASSED.

D. Recommended that the regular subscription rate be increased to $12.50, effective with Vol. 117. PASSED.

Submitted by DAVID M. DENTON.

XVI. PENNSYLVANIA SCHOOL FOR THE DEAF

Dr. Philip Bellefleur explained to the members present the conditions which led to the crises at Pennsylvania School for the Deaf. First, the position of the Administrator, after only two years, in moving from the Pennsylvania School for the Deaf oral philosophy to a total communication program and, second, a very difficult financial situation. These two conditions are not related.

Speaking of the financial crisis, Dr. Bellefleur explained that the Board of Trustees had decided that they could no longer operate the school because of a growing deficit which was close to one-half million dollars a year. The governing board, therefore, has begun negotiations with the State of Pennsylvania to take over the operation of the school. However, if this happens, Dr. Bellefleur feels that, in accordance with a restructuring of school districts into intermediate school districts and legislation which mandates public school districts to set up programs for the handicapped, there is little hope that the State will continue to operate the school as a school for the deaf, but will rather try to integrate the students into their own intermediate school district programs so that they will be closer to home.

Other members present cited similar kinds of movements in other states which would ultimately phase out private schools and even large public residential schools. Concern was voiced over the types of programs provided as regards facilities, staffing, equipment, etc. After much discussion the president asked James Little and his Committee on Accreditation to up-date minimal standards necessary for a good educational program for deaf children. Many suggestions were given from the members present as to the kinds of material to be incorporated into an updating on standards.

However, as a "stop-gap" measure and to give Dr. Bellefleur some support in this very immediate problem Dr. Stelle will send a letter to Dr. Bellefleur, Dr. Craig and the Pennsylvania State Education Department, Director of Special Education—Dr. William Hortman, stating the Conference's concern over having adequate educational programs for deaf children and give some of the major guidelines or criteria seen necessary for such programs. When the final report is ready this can also be sent.

Dr. William Craig will also volunteer to act as a consultant to the Pennsylvania State Education Department.

XVII. NATIONAL CENTER FOR DEAF-BLIND YOUTHS AND ADULTS

Dr. Stelle invited Desolee Yeiser to report to the Conference on the National Center for Deaf-Blind set up temporarily in New Hyde Park, Long Island. The permanent home for the Center will be at

Sand Point, Long Island. The Industrial Home for the Blind was granted the right to operate the National Center. They will eventually be setting up fifteen state regions on the eastern seaboard and setting up regional offices. Aims for the program are:

1. A national registry of the deaf-blind
2. In-service training
3. Aids for the deaf-blind
4. Intensive one-week training programs
5. Consultation services

Boyce Williams cited the need for input from deaf educators and the need for teachers of the deaf and psychologists knowledgeable of the deaf in this program.

XVIII. School Libraries

Dr. Stelle read an announcement to the CEASD from Ben M. Schowe, Jr., concerning the meeting of the School Librarians for the Deaf and Associates during the CAID meetings and asking administrators to send representatives to this meeting and urge others to attend. The announcement appears elsewhere in these minutes.

XIX. Legislation

Boyce Williams urged support of H.R. 8395 which is the Rehabilitation Act of 1971 and provides for complete services from preschool through the aged. These services include vocational training, social services and health services. The Bill also includes H.R. 5610 which calls for the establishment of a Vocational Training Center for Low-Achieving Deaf Adults and Youths.

XX. Reports of Standing Committees

1. Committee on Accreditation of Schools

Following a report of the chairman James A. Little, a motion was made by Mr. Little to approve the recommendation for accreditation of the Idaho School for the Deaf and the Florida School for the Deaf and the Blind. The motion was seconded by Joseph Youngs and carried. A full report of this committee is included later in these minutes.

2. Committee on Training and Certification of Dormitory Counselors

Mr. Lloyd Harrison, chairman, and Mr. Joseph Youngs, secretary of the committee, submitted a report on the training and certification of dormitory counselors. A copy of the report is contained in the minutes. Mr. Youngs also reminded the group of the "grandfather clause" in the certification requirements which allows dormitory counselors working at a school fifteen years or longer to receive certification from the Conference. This clause terminates in December 1972.

3. Committee on the Deaf-Blind

As representatives of the Conference of Executives to the National Committee on Services for Deaf-Blind Children, Edward Reay and Eldon Shipman reported on a meeting held in Louisville, Kentucky, attended by Joseph R. Shinpaugh, in October 1970, and in which a reorganization of the National Committee for Deaf-Blind Children was inaugurated. At that time Dr. Roy Stelle asked the above-named members of the Conference to act as the Conference representatives on the National Committee on Services for Deaf-Blind Children. A copy of their report is contained in these proceedings.

4. Committee on Educational Research

Dr. Robert Frisina presented the report of this Committee. The Committee viewed its areas of concentration along the following lines:

(a) To collate and suggest for dissemination such information regarding research as may be of use to the Association members and other appropriate groups and individuals.

(b) To serve in an advisory capacity to members of the Association regarding research as they may request such assistance through the Office of the President.

(c) To recommend and to inform the Association, through its President, on research implications of matters pertaining to impending or enacted legislation by various governmental bodies.

5. Committee on Higher Education

J. Dean Twining presented this report, which is contained elsewhere in these proceedings.

6. Interagency Committee

Dr. Howard Quigley presented a report on the CEC meeting which he attended. A copy of this report is contained elsewhere in these proceedings.

7. Committee on Membership

In the absence of Chairman C. Joseph Giangreco a written report of the activities of this Committee was presented and is contained elsewhere in these proceedings.

8. Committee on Multiple Handicapped

Chairman Alfred J. Lamb reported that his committee had no report at this time.

9. Committee on Statistics

David M. Denton presented the report of the Committee on Statistics. It concerned itself primarily with a progress report on the Annual Survey of Hearing Impaired Children and the National Census of the Deaf. The Committee expressed gratitude to the National Association of the Deaf and the Office of Demographic Studies for these two excellent projects. Persons desiring latest information regarding the census are urged to write to the Office of Demographic Studies at Gallaudet College or to the National Association of the Deaf.

10. Committee on Public Relations

Stanley D. Roth, Chairman, presented the report of the Committee on Public Relations. In response to Emil Ladner's letter to Dr. Roy Stelle dated June 4, 1971, Dr. Roth moved to send Conference Proceedings to member organizations of the Council of Organizations Serving the Deaf (COSD). The motion was seconded by Kenneth Huff and passed.

11. Council of Organizations Serving the Deaf (COSD)

The Conference of Executives of American Schools for the Deaf was represented at the COSD Board of Directors meeting held in Atlantic City, New Jersey, on March 5 and 6, 1971, by Stanley D. Roth and Joseph Youngs. Their full report of this meeting is contained elsewhere in these proceedings.

12. Committee on Vocational Education

Roy Parks reported on two pieces of legislation which pertain to vocational education, namely, H.R. 8395 and H.R. 5610. The first mentioned is the Rehabilitation Act of 1971 and includes the second (H.R. 5610) which calls for the amendment of the Vocational Rehabilitation Act to provide for the establishment of a National Comprehensive Regional Rehabilitation Center for Low (Under) Achieving Deaf. Mr. Parks stated that there had been no hearings on these proposed laws to date. He urged support of this legislation. A copy of H.R. 5610 is contained in these proceedings.

13. Joint Committee on Audiology and Education of the Deaf

Dr. William Castle presented a report of this Joint Committee. No meetings have been called since early 1969 because of lack of funds to support such meetings. However, a two week institute on audiology for supervising teachers of the deaf was sponsored by the Committee, hosted by the University of Kansas Medical Center with funding from the Bureau of Education of the Handicapped. A full report is contained elsewhere in the minutes.

14. Council on Education of the Deaf

Ben E. Hoffmeyer, President, presented the report of the Council on Education of the Deaf. It was reported that the articles of incorporation had been completed and thus the CED was officially made responsible for Teacher Certification and Teacher Training accreditation in the education of the deaf. Dr. Ralph Hoag reported on the Preparation and Certification Committee. The final report of this Committee was passed out and also a resolution to have the Conference approve of their representatives on the Council voting in favor of these standards. Ben Hoffmeyer commended Dr. Hoag and his Committee. A full report and the resolution are contained elsewhere in these proceedings.

15. Legislation Committee

Dr. Thomas Behrens gave a report from the Legislation Committee. Dr. Lloyd Graunke moved that a resolution be drawn up by the Resolutions Committee asking for the continuance of Title I and Title VI monies for handicapped children. Kenneth Huff seconded the motion and it was carried.

Dr. Behrens felt that this was a good idea, but asked that the timing of sending the resolution be left to the discretion of the Legislation Committee.

16. The Educational Media Committee

No report.

17. Committee on Parent Education

Audrey Hicks, Chairman, presented the report from this Committee which contained approximately ten recommendations to the Conference in order to implement a more effective parent education program. A full report is contained elsewhere in these proceedings.

18. Resolutions Committee

The following resolutions were submitted to the Conference by Sister Anne Behre and her committee:

RESOLUTION 1

Whereas, the 43rd Conference of Executives of American Schools was hosted by the Arkansas School for the Deaf in Little Rock, June 26–27, 1971, and

Whereas, the official hosts were Board Superintendent and Mrs. Roy Parks of the Arkansas School, and

Whereas, the excellent planning and hospitality of our hosts resulted in an enjoyable and productive conference,

Let it be resolved that the conference extends its sincere appreciation to Superintendent and Mrs. Roy Parks and the staff of Arkansas School, for everything they planned and carried out for a successful and congenial meeting.

Joseph R. Shinpaugh moved to approve the above resolution, seconded by Lloyd Harrison, the motion passed.

RESOLUTION 2

Whereas, it is believed that there is a strong probability that Titles I and VI of P. L. 89–313 may lose the support of Congress, and

Whereas, this support has proved to be a source of improved quality education for handicapped children,

Be it resolved that CEASD go on record as recommending strongly that the Congress continue to support financially Titles I and VI, P. L. 89–10 and P. L. 89–313 in the same degree as it has in the past.

Kenneth Huff moved the approval of this resolution, seconded by Dr. Thomas Behrens. The motion passed.

RESOLUTION 3

Whereas, the interests of all deaf students who have enrolled and who will enroll at the National Technical Institute for the Deaf have been consistently supported by Congress and the Department of Health, Education and Welfare as the providers of budgets for operations and construction and by the Rochester Institute of Technology as the sponsoring institution,

Be it resolved that the President of CEASD send an appropriate expression of appreciation for the organization to Senator Magnuson, Congressman Flood, Secretary Richardson, and President Miller of RIT.

Lloyd Harrison moved to approve the above resolution, seconded by Dr. Ralph Hoag. The motion passed.

RESOLUTION 4

The appointed Committee on Professional Preparation and Certification of the Council on Education of the Deaf has worked during the two-year period since the formation of this Committee in July, 1969, on the revision of standards adopted from the Conference of Executives of American Schools for the Deaf.

Whereas, several drafts of proposed standards have been reviewed, questioned, and discussed by groups and individuals representing interests in and for the Alexander Graham Bell Association for the Deaf, The Conference of Executives of American Schools for the Deaf, and The Convention of American Instructors of the Deaf, and,

Whereas, three major open discussion meetings held during 1970 provided the opportunity for state directors of special education, teacher educators in institutions of higher education, teachers of the deaf, administrators of schools and programs for the deaf, the deaf, and parents of deaf children to react, comment, and offer suggestions to the Committee, and,

Whereas, the Executive Board of the Council on education of the Deaf reviewed and approved in principle the contents of proposed standards at its meeting in New York City in February of 1970 with the suggestion that, after final editing, the document be presented to the three respective member organizations for review and approval,

Be it resolved that the June 1971, draft of proposed standards be accepted (subject to resolution of issues that may be voted by the membership at this meeting) by The Conference of Executives of American Schools for the Deaf and that the representatives of the Conference on the Executive Board of the Council on Education of the Deaf be instructed and authorized to formally adopt these standards at its next meeting.

Joseph Youngs moved to approve the above resolution, seconded by Stanley Roth. The motion passed.

RESOLUTION 5

Whereas, the Media Services and Captioned Films branch of the Bureau of Education for the Handicapped has been of enormous value in furthering the advancement and development of the deaf of the Nation; and

Whereas, this development has come through the use of "Captioned Films", media centers, national workshops, grants, equipment, materials, and many other activities; and

Whereas, Dr. Gilbert Delgado brought to the office his experience as an academic supervisor, teacher, counsellor and active member of various professional committees; and

Whereas, Dr. Gilbert Delgado, Chief of the Media Services and Captioned Films branch has been very influential, shown leadership and direction for the Media Services and Captioned Films program; and

Whereas, Dr. Gilbert Delgado is resigning as Chief of the Media Services and Captioned Films branch to accept another position: Be it therefore

Resolved, that the Conference of Executives of American Schools for the Deaf, in conference assembled in Little Rock, Arkansas, acknowledge the great contribution Dr. Gilbert Delgado has made to the profession and for the unsparing use of his time and endeavors; and be it further

Resolved, that a copy of this resolution be spread on the minutes of the Conference of Executives of American Schools for the Deaf and copies be sent to Dr. Edwin Martin, Associate Commissioner, Bureau of Education of the Handicapped; Dr. Frank Withrow, Director, Division of Educational Services; and to Dr. Gilbert Delgado, resigning Chief of the Media Services and Captioned Films branch of the aforementioned Bureau.

Dr. Roy Stelle moved to approve the above resolution, seconded by Sister Anne Behre. The motion passed.

19. Joint Committee on Mental Retardation and Education of the Deaf

Dr. W. Lloyd Graunke gave the report from this Joint Committee indicating meetings and questionnaires which had been held and distributed concerning the problems of the deaf retarded. The Committee asked for any information on programs for the deaf retarded from schools and programs for the deaf, as well as those for the retarded. A full report is contained elsewhere in these minutes.

XXI. Constitution and By-Laws

President Roy Stelle opened the floor for discussion on the proposed Constitutional revisions which the members had received prior to the meeting. After some discussion on Article I—Name, Lloyd Graunke moved that the name of the association be changed to read "American Association of Schools and Programs for the Deaf, Inc.". The motion was seconded by Lloyd Harrison. In the discussion on this motion which followed, Audrey Hicks moved to amend the motion by dropping the word "American" so that the name of the association would read "Association of Schools and Programs for the Deaf, Inc.". Armin Turechek seconded the motion and it was not carried. Since it seemed evident from the discussion that the motion on the floor was not the name which most members wanted, Dr. Graunke withdrew his original motion. Dr. William Castle moved that the name of the Association as it appears in Article I, Section I, read as follows: "The American Association of Schools for the Deaf, Inc.". Ed Tillinghast seconded the motion and it was carried.

However, at a special meeting of the Association on Thursday, July 1, 1971, attended by about forty members, several members suggested that the old name of the organization should be retained. There was strong support for this suggestion. Dr. William McClure moved that a mail ballot be sent to all eligible members for a vote on retaining the original name of the association. Ken Huff seconded the motion and it was passed.

In a discussion of the bylaws Dr. Castle moved that Article I, Section III, paragraph 3, sentence 2 should read as follows: "Such programs should ordinarily have five full-time professional employees or the equivalent working with hearing impaired persons and should not be an integral part of a larger program already holding membership in the Association."

Dr. Lloyd Graunke seconded the motion and it was carried.

After a discussion on Article II, Section IV, of the bylaws referring to standing committees, Ed Tillinghast moved to keep the Educational Research and Statistics standing committees separated. The motion was seconded by Hugo Schunhoff and carried.

Ed Tillinghast moved to put the standing committee on Parent Education back into Article II, Section IV. Lloyd Graunke seconded the motion and it was carried.

Armin Turechek moved to put the standing committee on the deaf-blind back into Article II, Section IV. Ed Tillinghast seconded the motion. In the discussion which followed Dr. Stelle explained that the Association already had representation on a Joint Committee on the Deaf-Blind which was a National Committee on Services for Deaf-Blind children. Mr. Turechek withdrew his original motion. Richard Lane then moved that a Joint Committee on the Education of the Deaf-Blind be added to the list of joint standing committees named in Article II, Section IV of the bylaws. Ken Huff seconded the motion and it was carried. Richard Lane moved that the following description of the Joint Committee on the Education of the deaf-blind be inserted between the last and second last paragraphs of Article II, Section IV, of the bylaws: "The Joint Committee on the Education of the Deaf-Blind shall consist of 2 members appointed by the President to serve on the National Committee on Services for Deaf-Blind Children with representatives from AEVH."

Melvin Brasel seconded the motion and it was carried. Ed Reay strongly suggested that the appointees to this committee be two Superintendents from schools with deaf-blind departments.

There being no further changes or amendments Dr. Stelle called for a motion to approve the Constitutions and bylaws as amended. However, after a count of the membership present (35), it was determined that there was not a sufficient number to approve the new constitution and bylaws. Therefore, Dr. Stelle postponed the voting until the evening banquet, at which time the necessary majority of members was present and on a motion by Dr. William McClure, seconded by Joseph Youngs, the constitution and bylaws, as amended, were approved by the membership.

XXII. Report of Nominating Committee and Election of Officers

Members of the Executive Committee whose term expired in June, 1971, were John D. Harrington, P. S. #158 in New York City, and Doin Hicks, Model Secondary School for the Deaf in Washington, D.C. To fill these vacancies and add the additional three members to the Committee as called for in the newly adopted constitution, the Nominating Committee presented the following slate:

1. Newton Farmer Walker, South Carolina School for the Deaf and the Blind, Spartanburg, South Carolina—1974.
2. Frank Powell, Pilot School for the Deaf, Callier Hearing and Speech Center, Dallas, Texas—1974.
3. Eldon Shipman, West Virginia School for the Deaf, Romney, West Virginia—1974.
4. Robert Frisina, NTID, Rochester, New York—1973.
5. Joseph Demeza, Ontario School for the Deaf, Belleville, Ontario—1972.

The President, Dr. Roy Stelle, opened the floor for further nominations. There being no other nominations from the floor, nominations were closed on a motion by R. T. Youngers, seconded by Joseph

Shinpaugh and passed. Edward Tillinghast moved to elect the slate of officers as nominated, seconded by Thomas Behrens. The motion passed.

XXIII. Nominations for Honorary Membership

The following retired professional leaders in the field of education of deaf children were nominated for honorary membership in the organization:

John Gough
Marshall Hester
Rosemary Cleary
Virgil Epperson
Burke Boatner
Archie Laird

Lloyd Harrison moved that the above-named be given honorary membership in the Conference, seconded by Sister Anne Behre. The motion carried.

XXIV. 1972 Toronto Meeting

Donald Kennedy announced the tentative dates of the 1972 meeting of the Conference as Sunday, April 30, 1972, through Friday, May 5, 1972. The Conference headquarters will be the Royal York Hotel in downtown Toronto.

XXV. Adjournment

The 43rd meeting of the Conference of Executives of American Schools for the Deaf, Inc., adjourned at 10:40 a.m., Thursday, July 1, 1971.

Respectfully submitted,

Sister Nora Letourneau, *Secretary.*

MEMBERS PRESENT

School and Official Representative

1. Arizona State School for the Deaf and the Blind, Tucson, Ariz.; Edward W. Tillinghast.
2. Arkansas School for the Deaf, Little Rock, Ark.; Roy G. Parks.
3. California School for the Deaf, Berkeley, Calif.; Hugo F. Schunhoff.
4. California School for the Deaf, Riverside, Calif.; Richard G. Brill.
5. SELACD Program for the Deaf, Downey, Calif.; and Southwestern School for the Deaf, Los Angeles, Calif.; Ellery Adams.
6. Manitoba School for the Deaf, Winnipeg, Manitoba, Canada; Donald M. Plummer.
7. Ontario School for the Deaf, Belleville, Ontario, Canada; Joseph G. Demeza.
8. Ontario School for the Deaf, Milton, Ontario, Canada; Donald E. Kennedy.
9. Colorado School for the Deaf and the Blind, Colorado Springs, Colo.; Armin G. Turechek.
10. American School for the Deaf, West Hartford, Conn.; Ben E. Hoffmeyer.
11. Margaret S. Sterck School for the Hearing Impaired, Newark, Del.; J. Paul Rudy.
12. Kendall School for the Deaf, Washington, D.C.; Thomas R. Behrens; Leland Clack (official proxy for July 1, 1971 meeting).
13. Model Secondary School for the Deaf, Washington, D.C.; Doin Hicks.
14. CEASD—Executive Manager, Washington, D.C.; Howard M. Quigley.
15. Florida School for the Deaf and Blind, St. Augustine, Fla.; William J. McClure.
16. Idaho School for the Deaf and the Blind, Gooding, Idaho; Edward W. Reay.
17. Black Hawk Hearing Handicapped Program, Moline, Ill.; Jack E. Handley.

18. Illinois School for the Deaf, Jacksonville, Ill.; Kenneth R. Mangan.
19. Indiana School for the Deaf, Indianapolis, Ind.; Alfred J. Lamb.
20. Kansas School for the Deaf, Olathe, Kan.; Stanley D. Roth.
21. Kentucky School for the Deaf, Danville, Ky.; Jack W. Brady.
22. Louisiana State School for the Deaf, Baton Rouge, La.; Lloyd V. Funchess.
23. Governor Baxter State School for the Deaf, Portland, Maine; Joseph P. Youngs.
24. Maryland School for the Deaf, Frederick, Md.; David M. Denton.
25. Michigan School for the Deaf, Flint, Mich.; Bruce R. Siders.
26. Minnesota School for the Deaf, Faribault, Minn.; Melvin H. Brasel.
27. Mississippi School for the Deaf, Jackson, Miss.; Robert S. Brown; Hugh Prickett (official proxy for Robert Brown, July 27, 1971).
28. Missouri School for the Deaf, Fulton, Mo.; Lloyd A. Harrison.
29. Nebraska School for the Deaf, Omaha, Neb.; George H. Thompson.
30. New Mexico School for the Deaf, Santa Fe, N. M.; James A. Little.
31. Cleary School for Children, Lake Ronkonkoma, N.Y.; Sister Loyola Marie.
32. Lutheran School for the Deaf, Mill Neck, N.Y.; Melvin W. Luebke.
33. National Technical Institute for the Deaf, RIT, Rochester, N.Y.; Robert Frisina.
34. New York School for the Deaf, White Plains, N.Y.; Roy M. Stelle.
35. New York State School for the Deaf, Rome, N.Y.; J. Jay Farman.
36. Rochester School for the Deaf, Rochester, N.Y.; Ralph L. Hoag.
37. School for Language and Hearing Impaired Children, New York, N.Y.; John D. Harrington.
38. St. Francis de Sales School for the Deaf, Brooklyn, N.Y.; Sister Anne Behre.
39. St. Mary's School for the Deaf, Buffalo, N.Y.; Sister Nora Letourneau.
40. Eastern North Carolina School for the Deaf, Wilson, N.C.; Marvin M. Burley (official proxy for R. M. McAdams).
41. North Carolina School for the Deaf, Morganton, N.C.; Charles R. Henderson.
42. North Dakota School for the Deaf, Devils Lake, N. Dak.; Allen J. Hayek.
43. St. Rita School for the Deaf, Cincinnati, Ohio; Reverend Paul F. Klenke.
44. Oklahoma School for the Deaf, Sulphur, Okla.; R. T. Youngers.
45. Oregon State School for the Deaf, Salem, Oreg.; Marvin B. Clatterbuck.
46. Pennsylvania School for the Deaf, Philadelphia, Pa.; Philip A. Bellefleur.
47. Western Pennsylvania School for the Deaf, Edgewood, Pittsburgh, Pa.; William N. Craig.
48. South Dakota School for the Deaf, Sioux Falls, S. Dak.; A. S. Myklebust.
49. Tennessee School for the Deaf, Knoxville, Tenn.; W. Lloyd Graunke.
50. Callier Hearing and Speech Center, Dallas, Tex.; Frank W. Powell.
51. Sunshine Cottage School for Deaf Children, San Antonio, Tex.; Audrey Hicks.
52. Texas School for the Deaf, Austin, Tex.; A. W. Douglas.
53. Utah School for the Deaf and the Blind, Ogden, Utah; Robert W. Tegeder.
54. Austine School for the Deaf, Brattleboro, Vt.; Richard K. Lane.
55. Virginia School at Hampton, Va.; William J. McConnell.
56. Virginia School for the Deaf and the Blind, Staunton, Va.; Joseph R. Shinpaugh.
57. West Virginia School for the Deaf and the Blind, Romney, W. Va.; Eldon E. Shipman.
58. The Wisconsin School for the Deaf, Delavan, Wis.; Kenneth F. Huff.

ASSOCIATE MEMBERS PRESENT

1. Ellory Adams, Office of Los Angeles Superintendent of Schools, California.
2. Henry O. Bjorlie, New York State School for the Deaf, Rome, N.Y.
3. Marvin Burley, Eastern North Carolina School for the Deaf, Wilson, N.C.
4. Edmund Cassetti, American School for the Deaf, West Hartford, Conn.
5. Dr. William B. Castle, NTID, Rochester, N.Y.
6. Dr. Leo Dicker, University of Wisconsin, Milwaukee, Wis.
7. Patrick J. Dowling, South Carolina School for the Deaf and the Blind, Spartanburg, S.C.

8. S. Theodore Guttadore, Community College of Denver, Colo.
9. Virginia Heidinger, Washington, D.C.
10. Dr. William D. Jackson, University of Tennessee, Knoxville.
11. Kendall D. Litchfield, New York School for the Deaf, White Plains, N.Y.
12. Winfield, McChord, Kentucky School for the Deaf and Blind, Danville, Ky.
13. Lucy Moore, Trenton, N.J.
14. Dr. John C. Nace, Sterck School, Newark, Del.
15. Lloyd R. Parks, Kansas School for the Deaf, Olathe, Kans.
16. B. J. Peck, Oregon School for the Deaf, Salem, Oreg.
17. H. G. Royall, Jr., North Carolina School for the Deaf, Morganton, N.C.
18. Dr. Jerome D. Schein, New York University, N.Y.
19. Frederick Schrieber, NAD, Silver Spring, Md.
20. John S. Shipman, Virginia School for the Deaf and the Blind, Staunton, Va.
21. J. Dean Twining, Ball State Teachers College, Muncie, Ind.
22. Dr. Boyce R. Williams, Washington, D.C.
23. Dr. Frank B. Withrow, Lanham, Md.
24. Hollis, W. Wyks, Marie H. Katzenbach School for the Deaf, West Trenton, N.J.
25. Sister Virginia Young, St. Mary's School for the Deaf, Buffalo, N.Y.

TREASURER'S REPORT

Mr. President, officers and members of the Conference, it is my pleasure to submit a brief report for the period July 1, 1970 to May 31, 1971.

As treasurer, I have assumed the responsibility to review quarterly statements, and discuss the financial operation with Dr. Howard Quigley, executive secretary. On Thursday, June 17, 1971, I visited the Conference Headquarters at 5034 Wisconsin Avenue, Washington, D.C. to conduct a preaudit. On the basis of my observations and examinations, all receipts, disbursements and deposits are in satisfactory order being maintained by an excellent accounting system.

Mr. President, I express deep appreciation to Dr. Quigley and his entire staff for their cooperation. I also recommend acceptance of the summary report for the current fiscal year through May 31, as prepared and presented by the executive secretary with the understanding that a complete report containing all financial transactions through June 30, 1971 will be forthcoming as soon thereafter as possible.

Respectfully submitted,

WM. J. MCCONNELL, *Treasurer.*

PROFESSIONAL BUSINESS MANAGEMENT, INC.,
Washington, D.C., November 9, 1971

CONFERENCE OF EXECUTIVES OF THE AMERICAN SCHOOLS FOR THE DEAF
Washington, D.C.

GENTLEMEN: At your request we have conducted an audit of the books and records of the Conference of Executives of the American Schools for the Deaf for the period of July 1, 1970 through June 30, 1971, and submit herewith the following statements:

Exhibit A: Statement of Receipts
Exhibit B: Statement of Disbursements
Exhibit C: Statement of Recapitulation of Cash

In our opinion the bookkeeping records have been kept in a neat and orderly manner and all entries have been made consistent with sound accounting principles.

Respectfully submitted.

WILLIAM E. POIST.

CONFERENCE OF EXECUTIVES OF AMERICAN SCHOOLS FOR THE DEAF

EXHIBIT A—STATEMENT OF RECEIPTS, JULY 1, 1970–JUNE 30, 1971

American Annals of the Deaf

Receipts:	
Subscriptions:	
Individual	$13, 416. 61
Bulk	1, 277. 28
Membership	24, 690. 00
Sales of magazine—single issues and back copies	1, 866. 02
Sales of books, pamphlets and reprints	5, 378. 21
Advertisements	5, 819. 39
Publishing service	450. 00
Sales of address lists	1, 030. 43
Sales of "Directory of Services For The Deaf":	
1970 edition	1, 443. 75
1971 edition	455. 00
Overpayments	33. 50
Closing of rubella account with Gallaudet College	407. 90
Special publishing projects	9, 450. 00
Social and rehabilitation services grant (HEW/SRS)	40, 000. 00
Royalties—microfilm sales—back issues	807. 98
Miscellaneous	209. 60
Total receipts	106, 735. 67

Educational Media Distribution Center

Receipts:	
Education contracts:	
Basic monthly charge	96, 655. 50
Indirect costs	7, 076. 50
Reimbursable items	131, 497. 69
Miscellaneous	227. 78
Total receipts	235, 457. 47

National Headquarters Office

Receipts:	
Memberships:	
School	10, 467. 58
Associate	1, 505. 00
Sales of books, pamphlets and reprints	578. 00
Overpayments	6. 50
Proceeds from annual convention	1, 000. 00
Certificate of merit account	320. 14
Repayment of loan to Convention of American Instructors of the Deaf	2, 500. 00
Miscellaneous	5. 36
Interest on savings	1, 169. 27
Reimbursements from Convention of American Instructors of the Deaf	8, 712. 36
Total receipts	26, 264. 21

Teacher Training and Certification Committee

Receipts:	
Interest on savings	99. 92
Contribution from Convention of American Instructors of the Deaf	1, 061. 82
Teacher certification application fees	3, 308. 48
Total receipts	4, 470. 22

EXHIBIT B—STATEMENT OF DISBURSEMENTS, JULY 1, 1970–JUNE 30, 1971

American Annals of the Deaf

Disbursements:	
Salaries and related taxes	$19, 228. 35
Rent and insurance	979. 47
Postage, delivery, freight and telephone	2, 421. 56
Office supplies	1, 383. 08
Travel	468. 83
Printing and duplication for office use	141. 95
Printing and distribution of magazine	56, 498. 82
Books and reprints purchased for resale	3, 718. 62
Publishing consultant services	18, 862. 50
Accountant, secretarial and other special services	1, 724. 60
Refunds	502. 33
Special publishing projects	8, 585. 65
Total disbursements	114, 515. 76
Gain (loss)	(7, 780. 09)

Educational Media Distribution Center

Disbursements:	
Salaries and related taxes	50, 865. 81
Rent and insurance	8, 850. 16
Postage, delivery, freight and telephone	458. 09
Office supplies	563. 36
Travel	3, 763. 94
Printing and duplication for office use	1, 977. 17
Accountant, secretarial and other special services	1, 077. 00
Equipment and maintenance	105. 82
Data processing	1, 146. 24
Miscellaneous	474. 23
Educational film depositories	31, 457. 25
Special publishing projects	17, 052. 00
Contract:	
Education film repair	22, 297. 07
Depository supplies and equipment	4, 540. 61
Depository film catalog cards	2, 694. 40
Feature film library booking fees	100, 252. 00
Feature film library supplies	5, 584. 84
Rent and equipment maintenance for libraries	7, 111. 60
Postage, delivery and freight	9, 774. 73
Total disbursements	270, 046. 32
Gain (loss)	(34, 588. 85)

National Headquarters Office

Disbursements:	
Salaries and related taxes	13, 923. 58
Rent and insurance	986. 01
Postage, delivery, freight and telephone	863. 65
Office supplies	329. 69
Travel	759. 07
Printing and duplication for office use	197. 47
Accountant, secretarial, and other special services	91. 00
Organization dues and contributions	728. 50
Data processing	462. 80
Refunds	4. 00
Miscellaneous	5. 50
Total disbursements	18, 351. 27
Gain (loss)	7, 912. 94

Teacher Training and Certification Committee

Disbursements:	
Meeting expenses	$1, 888. 50
Postage, delivery, freight and telephone	548. 93
Office supplies	238. 40
Travel	734. 22
Printing and duplication for office use	46. 85
Accountant, secretarial and other special services	400. 00
Equipment and maintenance	61. 43
Refunds	25. 00
Miscellaneous	66. 75
Total disbursements	4, 010. 08
Gain (loss)	460. 14

STATEMENT OF RECAPITULATION OF CASH, JULY 1, 1970–JUNE 30, 1971

EXHIBIT C—STATEMENT OF RECAPITULATION OF CASH, JULY 1, 1970–JUNE 30, 1971

American Annals of the Deaf

Opening balance—July 1, 1970	$32, 712. 38
Add:	
Total receipts through June 30, 1971	106, 735. 67
	139, 448. 05
Less:	
Total disbursements through June 30, 1971	114, 515. 76
Closing balance June 30, 1971	24, 932. 29

Educational Media Distribution Center

Opening balance—July 1, 1970	41, 534. 10
Add:	
Total receipts through June 30, 1971	235, 457. 47
	276, 991. 57
Less:	
Total disbursements through June 30, 1971	270, 046. 32
	6, 945. 25
Redeposits among accounts	(6, 790. 50)
Closing balance June 30, 1971	154. 75

National Headquarters Office

Opening balance—July 1, 1970	29, 138. 71
Add:	
Total receipts through June 30, 1971	26, 264. 21
	55, 402. 92
Less:	
Total disbursements through June 30, 1971	18, 351. 27
	37, 051. 65
Redeposits among accounts	6, 790. 50
Closing balance June 30, 1971	43, 842. 15

Teacher Training and Certification Committee

Opening balance—July 1, 1970	4,020.71
Add:	
Total receipts through June 30, 1971	4,470.22
	8,490.93
Less:	
Total disbursements through June 30, 1971	4,010.08
Closing balance June 30, 1971	4,480.85

REPORT OF THE ACCREDITATION COMMITTEE

Mr. President: To bring you up to date on the accreditation committee, there were eleven schools accredited between 1963 and 1970. According to the records that I have, they are as follows:

New Mexico School for the Deaf—1963.
St. Mary's School for the Deaf—1964.
Arizona School for the Deaf and the Blind—1964.
Western Pennsylvania School for the Deaf—1965.
North Dakota School for the Deaf—1965.
DePaul Institute for the Deaf—1966.
Kentucky School for the Deaf—1966.
Kansas School for the Deaf—1968.
Arkansas School for the Deaf—1968.
Oklahoma School for the Deaf—1968.
North Carolina School for the Deaf—1970.

This year two additional schools were recommended for accreditation, the Idaho School for the Deaf and the Florida School for the Deaf and the Blind.

We are also pleased to report that to date inquiries and requests concerning accreditation have been received from other schools located in various parts of the country. Evidently the schools were unable to secure funds for accreditation or might have had other requirements that could not be met during this year.

I should like to take this opportunity to express my sincere thanks to the accreditation committee for their assistance during this past year and especially to the following people who have given freely of their time and energy to do the evaluation work.

Mr. Lloyd Harrison, Superintendent, Missouri School for the Deaf.
Mr. George Thompson, Superintendent, Nebraska School for the Deaf.
Mr. Kenneth Huff, Superintendent, Wisconsin School for the Deaf.
Dr. Wm. N. Craig, Superintendent, W. Pennsylvania School for the Deaf.
Dr. Wm. Jackson, Director, Southern Regional Media Center for the Deaf.
Mr. Jack Brady, Superintendent, Kentucky School for the Deaf.

Respectfully submitted,

JAMES A. LITTLE, *Chairman, Accreditation Committee.*

COMMITTEE ON TRAINING AND CERTIFICATION OF DORMITORY COUNSELORS

Secretary's Report

Applications accepted	184
Applications rejected	9
Total applications received	193
Certificates issued:	
Class A	34+1
Class B	50+1
Class C	100
Total	184+2 upgraded

Number of certificates issued by States:

North Carolina School for the Deaf	35
California School for the Deaf (Berkeley)	24
Oregon State School for the Deaf	24
New Mexico School for the Deaf	18
Alberta School for the Deaf (Canada)	17+1
Florida School for the Deaf	15
American School for the Deaf (Connecticut)	12
Kansas School for the Deaf	9
Minnesota School for the Deaf	4
St. Mary's School for the Deaf (New York)	4
Ontario School for the Deaf (Belleville)	3
Louisiana State School for the Deaf	3
West Virginia School for the Deaf	3
Subtotal	171+1
Arkansas School for the Deaf	2
Interprovincial School for the Deaf (Nova Scotia)	2
Iowa School for the Deaf	2
Lexington School for the Deaf (New York)	2
Boston School for the Deaf (Massachusetts)	1+1
Arizona State School for the Deaf	1
Colorado School for the Deaf	1
Governor Baxter State School for the Deaf (Maine)	1
Virginia State School (Hampton)	1
Grand total	184+2

This report covers the period from April 7, 1964, to June 15, 1971.

JOSEPH P. YOUNG, Jr.,
Secretary.

FINANCIAL REPORT

April 1, 1970–June 15, 1971

Income		
Balance on hand, April 1, 1970	$420. 93	
Application fees received	153. 00	
		$573. 93
Expenses		
Miscellaneous purchases: seals, ink, pens		15. 00
Balance, June 15, 1971		558. 93

The foregoing funds have been placed in a savings account in the Maine National Bank, Falmouth, Maine.

JOSEPH P. YOUNGS, Jr.,
Secretary.

REPORT OF THE REPRESENTATIVES OF THE CONFERENCE OF EXECUTIVES TO THE NATIONAL COMMITTEE ON SERVICES FOR DEAF-BLIND CHILDREN

Last October, in Louisville, Kentucky, all persons present interested in the education of deaf-blind children met and formed an organization under the title the National Committee on Services for Deaf-Blind Children. Their intention is that this committee should replace the former National Committee for Deaf-Blind Children since this committee had served its purpose. The committee through its chairman expressed a desire to be affiliated with the Association for Education of the Visually Handicapped as well as the Council of Educational Administrators of Schools for the Deaf. As a consequence, I appointed an Ad Hoc Committee to consider the request with the resultant recommendations which were presented to and approved by the officers and directors of the AEVH. In undertaking this action, the officers and directors of the AEVH were hopeful that the CEASD would provide similar or equivalent support for the national committee.

At a meeting held October 26, 1970, in Louisville, Kentucky, all three committee members were present; Leland C. Sanborn, Joe R. Shinpaugh and Edward J. Waterhouse with Benjamin F. Smith as guest.

It was reported that the National Committee on Services for Deaf-Blind Children desired an affiliation with AEVH as well as the Conference of Executives of American Schools for the Deaf. Yet this group prefers a degree of autonomy for open membership and business actions.

The AEVH special committee recommends:

(1) That both AEVH and CEASD presidents appoint a representative to be a member of the National Committee on Services for Deaf-Blind Children and that the president of AEVH and CEASD be an ex-officio member.

(2) Membership on the National Committee be open to all interested persons.

(3) The National Committee elect its own officers and establish an executive committee in October of the even years for terms of two years.

(4) The National Committee submit a report to the Board of Directors of both organizations annually.

Respectfully submitted,

Edward W. Reay, *Superintendent,*
Idaho School for the Deaf and Blind.
Eldon Shipman, *Superintendent,*
West Virginia School for the Deaf and Blind.

REPORT OF THE COMMITTEE ON EDUCATIONAL RESEARCH

Present:

Dr. Kenneth Mangan; Dr. Lloyd Graunke, Dr. Jerome Schein.
Dr. Robert Frisina, Acting Chairman.

This report updates the functions and responsibilities of the Committee on Research. The Research Committee of the American Association of Schools for the Deaf functions in an advisory capacity to the President on matters pertaining to research in the area of deafness. Pursuant with this the Committee views its areas of concentration along the following lines:

AREA NO. 1

To collate and suggest for dissemination such information regarding research as may be of usefulness to the association members and other appropriate groups and individuals

Special items of research that are not routinely handled in other ways might be given some attention by this Committee so as to call attention the Association to them.

AREA NO. 2

To serve in an advisory capacity to members of the association regarding research as they may request such assistance through the office of the president

Examples of ways in which the Research Committee might be useful to Association members include such functions as:

(1) Assisting to locate part-time or full-time research talent needed by the school or program.

(2) Serving in an advisory capacity in the planning and/or conduct of research in the member's program.

(3) Serving as an informational resource on research aspects of deafness to the Association.

(4) Encouraging research groups and individuals in and outside government to focus on problems considered by Association members to be of critical importance in the education of deaf persons.

(5) Advising the President on current research issues for presentation and discussion of "white papers" at the biennial meetings of the Association.

AREA NO. 3

To recommend and to inform the association through its president on research implications of matters pertaining to impending or enacted legislation by various governmental bodies

In conclusion, the Committee views its role as one of great usefulness to the Association by performing the functions stated above. The Committee suggests that these functions and responsibilities be actively carried out and that the members of the Association be made aware that such services are available to them through the Committee. The Committee recommends that this report be referred to the Executive Committee for further action.

REPORT OF THE COMMITTEE ON HIGHER EDUCATION

The committee met at 7:30 a.m., June 26, 1971 with the chairman and three other members present.

A definition of committee function was necessary and the following represent the thinking of this group.

A. To serve in an advisory role to the president of CEASD regarding post-secondary education for deaf students. In conjunction with this, it is the suggestion of the committee that time be allotted at the Toronto meeting for a discussion of the current situation with respect to post-secondary programs for deaf students. This could be accomplished by the presentation of one or two "position papers" followed by a panel and open discussion.

B. To serve in an advisory capacity to individual members of the Conference in any manner they might feel beneficial. In particular, the committee could aid in formulating guidelines for proper funding, delineating programs, and the geographic locations of new post-secondary education facilities for deaf students.

It is felt that CEASD members can be of valuable service in their respective states by making themselves available as a consultant in instances where the establishment of post-secondary programs is under consideration. This would reduce the possibilities of duplicating existing facilities and enhance the opportunity for providing programs geared to the needs of the type of population to be served.

C. To keep informed of enacted and impending legislation which affects post-secondary education of deaf students and to cooperate with the legislation committee of CEASD in regard to the communication of and the need for action on such information.

CEC INTERAGENCY COMMITTEE

Report of Meeting January 6, 1971

The CEC Interagency Committee met January 6, 1971, at Hospitality House, Crystal City, Arlington, Va. Dr. Leo Connor chaired the meeting. List of participants is attached.

William C. Geer, CEC Executive Secretary, reviewed the committee's function as that of "a forum where people talk about what happens or shouldn't happen to the children we're interested in." Members have mutual interest in the needs of exceptional children.

CEC Information Items Reported

Dr. Teresa Lawrence summarized activities of the CEC Information Center and reported the Center staff's plans to offer broader, more in-depth services.

Fred Weintraub described the State-Federal Information Center working in CEC and said the center can run searches on any laws concerning handicapped children that can be broadly construed as having educational implications. Maurice Flagg reported CEC's forthcoming 50th anniversary (1972) and said agencies will be invited to help mark the observance, which will focus on exceptional child needs, services and progress.

Agency Presentations

Thomas Skelley, Chief, Division of Disability Services, Rehabilitation Services Administration, D/HEW: Reviewed action of the Developmental Disabilities Act . . . Division of Mental Retardation in D/HEW developing implementation materials . . . National Advisory Council for Developmental Disabilities was meeting January 6 &

7 to consider draft regulations, will be meeting again before March 1 to determine ways for state governors to implement the act . . . $11.215 million appropriated for 1970–71 year.

Carolyn Harmon, Assistant to the Director, Office of Child Development, D/HEW: Office of Child Development "inherited the mandate of the old Children's Bureau" . . . presently administers only the Head Start program . . . anticipates much activity growth in the day care and child development areas, these being a component of all foreseeable legislation in areas of OCD interest . . . OCD is trying to prepare the nation for day care for children, will publish a "Principles of Day Care" handbook, expects to contract in 1972 for a handbook on day care of handicapped children . . . continuing parent and child center demonstrations for coming year and evaluating . . . developing child care training and people and plan to produce a cadre of teacher aides.

Edwin W. Martin, Associate Commissioner, Bureau of Education for the Handicapped, U.S. Office of Education: Reported compilation of document on how to get greatest impact from $1 million in developmental disabilities legislation for learning disabled children . . . Noted increase in USOE funding for exceptional child programs from $35 million in FY67 to $225 million today ($130 million of this via BEH) . . . Reported chief BEH priority as carefully targeted support for innovative state and local programs.

Fred Weintraub, in a springboard summary of legislative and government trends, summarized developments affecting exceptional child programs (specific legislation, agency personnel changes, White House Conference on Children, Nixon Administration actions, new "in" phrases such as "accountability," etc.) . . . Suggested that agencies consider a "politics of positivism" in relations to Nixon Administration initiatives, consider how those initiatives could serve exceptional children . . . Noted that growing competition for appropriations may disadvantage handicapped and require new approaches on part of agencies advancing interests of exceptional . . . Said that organizations are increasingly being called upon to monitor public agency actions . . . Pointed out that organizations themselves, in order to be effective change agents, will need to serve as models of change and cooperation . . . Saw a trend away from agency-organization focus on programming to a focus on the child.

Frank Withrow summarized "Closer Look," a national communications effort in which the Bureau for Education of the Handicapped is seeking to promote careers in work with the handicapped and fuller development of services for the handicapped.

Discussion following the Weintraub presentation focused on the implications of revenue-sharing. Point was made that organizations will need to refocus much of their governmental relations work on state and local governments. But U.S. congressional money-channeling committees remain highly important.

Group asked CEC Governmental Relations Unit to make a report to next meeting about legislation approaches, initiatives, etc.

General discussion revealed the following as leading areas of interest among those attending: Advocacy (what does it mean to whom?) . . . gaps in services . . . 50-state comprehensive efforts . . . rights of the handicapped child . . . revenue sharing and its implications.

Re future meetings: Chairman Connor stressed importance of continuity of persons attending so committee can tackle questions and carry through . . . consensus of group seemed to be for three meetings a year.

REPORT OF MEMBERSHIP COMMITTEE

At the Executive Committee meeting in February, most of the problems dealing with membership were discussed and apparently recommendations have been made which will be discussed by the total Conference. These recommendations dealt with the following:

(a) Need for centralizing membership operations.
(b) Applications backlog—how to prevent?
(c) Use of standard application form.
(d) Method of nominating associate members.
(e) Method of keeping membership files up-to-date.

(a) The need for centralizing membership has been met by setting it up in the Executive Secretary's office. In addition to the set-up in Washington the Chairman of the Membership Committee is also keeping a running list on membership in Iowa.

(b) The Membership Committee is now keeping applications moving rapidly and apparently there is no more backlog.

(c) A new form will probably be completed by the end of this year and brought to the Conference for approval.

(d) The present method of nominating associate members seems to be satisfactory and will be continued. The list of associate members continues to grow and it is hoped that we will build this area up.

(e) Through the Executive Secretary's office and the Chairman of the Membership Committee, we are able to keep the membership files up-to-date. The schools are billed through the national office and most of the bookkeeping is done in that office.

The Membership Committee stands by ready to serve. An announcement can go out to the entire membership that anyone in the Conference is eligible to nominate a person for Honorary Membership if names are submitted to the Chairman of the Membership Committee. These names will be forwarded to the remainder of the Committee and then on to the Executive Committee of the Conference.

It is felt that everything is under control in this department and the Membership Committee is standing by waiting to see what will happen if the new regulations, as proposed by the Executive Committee, are adopted.

C. Joseph Giangreco, *Chairman.*

REPORT OF THE COMMITTEE ON STATISTICS

David M. Denton—Chairman
Peter Owsley
Leo Connor
John Harrington
Rev. James L. Aaron
Harriet G. Kopp

Lois Keizer
June Miller
Roy K. Holcomb
Hazel Hobbs
Gerald W. Powers
F. G. F. Cartwright

The present Committee on Statistics of the Conference, has not had an opportunity to meet since its formulation. The only formal contact the Committee has had, has been through the mail. The report being submitted by this Committee, therefore, does not represent specific work undertaken by the Committee itself, but instead deals with two projects of vital concern and interest, not only to the Committee, but to the Conference of Executives as well. Those projects are:

1. The Annual Survey of Hearing Impaired Children and Youth conducted by the Office of Demographic Studies at Gallaudet College.
2. The National Census of the Deaf which is being conducted by the National Association of the Deaf.

Through the generous assistance of Dr. Jerome Shein, Project Director and Mr. Marcus T. Delk, Senior Research Associate, the Committee on Statistics is submitting to the Conference a progress report of the National Census of the Deaf. A limited number of additional copies of this report shall be made available to persons requesting them.

Through the excellent cooperation of Mr. Augustine Gentile and his staff in the Office of Demographic Studies, a similar progress report on the activities of The Annual Survey of Hearing Impaired Children and Youth has been made available to the Committee. Additional copies of this report are also available.

The information being provided by The Annual Survey and by The National Census is of immeasurable value to administrators of school programs. I am sure that the Committee on Statistics echoes the sentiments of the Conference of Executives when expressing gratitude to the National Association of the Deaf and the Office of Demographic Studies for these two excellent projects.

THE ANNUAL SURVEY OF HEARING IMPAIRED CHILDREN AND YOUTH BACKGROUND AND CURRENT ACTIVITIES

The Annual Survey was formally established in May, 1968 and is conducted by the Office of Demographic Studies of Gallaudet College. The operational feasibility and methodologies of the program were determined during two preceding years of pilot and developmental work in a five state area. The Division of Research, Bureau of Education for the Handicapped, Office of Education, Department of Health, Education and Welfare, initiated the Annual Survey and provides most of the funding. It took root, however, from the efforts of many organizations and individuals in the field who saw a need for a central and permanent organization for the collection of statistics on deafness.

1968–69 School Year Data Collection

During the first year of the program, data collection activities were directed towards all schools for the deaf and a representative sample (15 percent) of all special classes. In addition, records on students who were receiving itinerant services were obtained in total from two states and in part from several states. In all 25,363 individual records were collected. This represents nearly 80 percent of the total enrollment of all institutions invited to participate.

Also, during the first year an academic achievement testing program was conducted. Over 12,000 Stanford Achievement Tests were administered. The Annual Survey supplied testing materials and scoring services free of charge to participating programs. Achievement test scores for hearing impaired students based on the results of that testing program were published and distributed in the Fall of 1969. In addition, each participating school received distribution of achievement test scores based on the performance of their own students. Specific information regarding methodologies and content of the achievement testing program can be found in the publication by the Annual Survey entitled *Academic Achievement Test Performance of Hearing Impaired Students: United States, Spring 1969.*

1969–70 School Year Data Collection

Last year the Annual Survey extended its coverage. Efforts were made to reach students in all of the special classes for the hearing impaired, as well as in all of the schools. Data were obtained on 35,285 students from 435 reporting sources. Several publications are now being prepared from these data. They will include:

Marginal summaries presented for a number of variables in order to give overview of data.

Detailed History of Hearing Loss—Variables to include Age of Onset of Loss, Age Loss Discovered, Probable Cause of Loss, Siblings' Hearing Loss and Parental Hearing Loss.

Preschool Children—Only concerned with students six years of age and under. Variables to include Parent Training, Age at Onset, Types of Program, Age Started Education.

Detailed Audiological Information—Variables to include Standard Used, Place Examined, Profession of Examiner, SAT and SRT Results. May also examine degree of reporting for the complete audiological.

Additional Characteristics—To provide cross tabulations of the variables Age Started Formal Education Prior to Age Six, Type of First Educational Program, Age at Onset and Age Loss Discovered.

Additional Characteristics—Cross tabulations between the variables Additional Handicapping Conditions, Type of Educational Program and Age Started Education.

These publications are expected to appear during the Spring and Summer of this year.

1970–71 School Year Data Collections

The forms for the 1970–71 school year are now being received and processed in the office. Approximately 600 reporting sources with about 42,000 students enrolled in their programs are cooperating with the Annual Survey this year. This represents an increase of 197 new participating educational programs with almost 8,000 students. At the same time, about 98% of those programs that participated last year have been retained in this year's Survey. Of the almost 800 programs invited to participate in Year III's data collection, 77% responded affirmatively. These 800 programs have an estimated enrollment of 48,000 hearing impaired children.

An Achievement Testing Program is again being conducted this year by the Annual Survey. Approximately 305 sources including roughly 22,000 students are involved in this program. The procedures being followed in the current program were heavily influenced by the results of Achievement Testing Program conducted by the Annual Survey during the 1968–69 school year. This influence is especially reflected in three areas of this year's program: (1) Students were given a screening test to determine the most approximate battery they should receive. (2) The schools were supplied with practice materials for their students. (3) In cooperation with Harcourt Brace & Jovanovich, the test publishers, special variations in the standard tests were developed where hearing impairment introduced special problems or unfair disadvantages to hearing impaired students.

The fact that a reliability study will be conducted on this year's program further distinguishes it from the 1968–69 program. Eight schools and 185 students will be involved in this test-retest reliability study. In conjunction with this work, the question of the validity of these tests will also be considered. This will be approached in two ways: first, teachers will be asked to predict student performance; second, internal analysis of the items will be conducted.

Three publications based on the results of this testing program are planned for later this year.

NATIONAL CENSUS OF THE DEAF

Progress Report II

I. Purposes of the Project

A. To determine the size of the deaf population of the United States, its geographical distribution, and its demographic characteristics. In accomplishing these objectives, the Census will develop and refine methods which can be applied to subgroups of deaf persons and to other handicapped populations.

B. To obtain directly from deaf persons such additional information about the deaf population as will lead to a fuller understanding of the situation of deaf adults in the world of work. The results of the Census will ultimately improve the lives of deaf people by providing more accurate information about their needs and thereby leading to better programs to meet these needs.

C. Because of the complexity of this project, a brief outline of the phases of the Census and the purpose of each is inserted here.

1. List Building. A concerted effort has been made to gather the name and address of every deaf person in the United States. Analysis of this List will provide one estimate of the geographical distribution of deaf people in the United States.
2. Verification Program. Some names on the List may duplicate one another; some may be those of deceased persons; some may be those of hearing persons; some names or addresses may

be incorrect. To correct these possible errors, a questionnaire is being mailed to every name on the List. In addition, the questionnaire responses will yield basic demographic information about the deaf persons on the List.

3. Household Survey. To obtain an independent estimate of the prevalence of deafness—that is, to determine how nearly complete the List is—a nationwide, stratified sample of 42,000 households will be contacted by the National Center for Health Statistics, U.S. Department of Health, Education and Welfare.

4. Interviews with Deaf Persons. Samples will be drawn from the List in accordance with the data gathered about the geographic and demographic distribution of the deaf population. Persons in the samples will be interviewed to obtain directly the detailed information which the Census was created to gather.

II. SUMMARY OF PREVIOUS ACCOMPLISHMENTS

Plans for the National Census of the Deaf have been developed over nearly a decade. In that period relevant studies have been conducted by the directors of this project, supported by the National Center for Health Statistics (and its predecessor, the National Health Survey); the U.S. Office of Education; the National Institute of Neurological Diseases and Blindness; Social and Rehabilitation Service and one of its predecessor components, the Office of Vocational Rehabilitation, subsequently the Vocational Rehabilitation Administration. These studies have been described in the original grant application and in last year's progress report. We, therefore, refer here only to a few major points derived from previous work that bear most directly on planned developments in the present project during the next year.

A. Definition of the target population

Extensive research has led to an operational definition which has been successfully tested in a variety of locations, under differing conditions, and with many varied groups of persons, with and without hearing losses. The target population for the Census is defined in expository terms as: All non-institutionalized residents of the United States who have lost, or have never had, the ability to hear and understand speech even when amplified, this loss having been suffered prior to 19 years of age.

The degree of loss will be determined by the hearing scale developed by Schein, Gentile and Haase from Bigman's earlier work. Age at onset will be established from the answers to questions previously designed by these researchers.

B. Sample design

The general statistical design of the Census and its underlying rationale have been elaborated by the noted statistician, Reuben Cohen, President of Response Analysis Corporation, Princeton, New Jersey, who continues as statistical consultant to the Census. The earlier uncertainty concerning sample size in the Household Survey phase of the Census has been resolved by securing the cooperation of the National Center for Health Statistics, thus making possible the use of a 42,000-household National sample (see below, Section IIIB, "Sample Design").

C. Casefinding

Earlier studies contributed the techniques for List Building. The efficiency of the List Building operation will be tested by the Verification Program, beginning January 18, 1971. Information concerning this program, described in Section IIIC, will be valuable to persons designing studies of other handicapped groups.

D. Computer programming

A major problem, that of economically eliminating duplications from the name list, was solved, largely by Robert Herbold, of the Gallaudet College Electronic Data Processing Laboratory, who adapted earlier computer research to the special needs of the Census.

E. Field problems

A number of feasibility studies were conducted to determine the validity and reliability of the Census methods. Included in this research were development and testing of the Hearing Scale, design of a mail questionnaire and testing of mail procedures, analysis and validation of questionnaire responses, and studies of interviewing of deaf respondents.

F. Questionnaire design

It was determined earlier that a three-step series of inquiries would represent the most efficient means of gathering maximum information within the budgetary limits of the Census. "Basic" data, including degree of hearing loss, age at onset, geographical location, age, sex, and marital status, will be obtained through the questionnaire already mailed to every person on the Name List. A second range of information items ("Standard" data), such as labor force status and educational achievement, will be obtained for respondents in all personal interviews. Subsamples will then be asked to answer more detailed inquiries (for "Supplemental" data) into specialized areas. Thus, basic data will be gathered for 100% of the Name List; standard data for a sample of about 3,000; and supplemental data of various topics for samples which may range from 500 persons up, with the sample size adjusted to the desired level of sampling error, consistent with the cost of obtaining and processing the data.

III. Activities from January 1, 1970 to December 31, 1970

The previous report dealt with the initial six months of the Census, which started late as a result of delayed funding. This report, however, covers a full twelve-month period. As in the earlier report, the subsections of Section III are keyed to the pages of the initial grant request on which the various activities of the Census are discussed.

A. Personnel

Several significant additions to the Census staff were made during the year. Most notably, Mr. Marcus Delk joined the Census staff in October, 1970, as Research Associate. Mr. Delk was most recently a

Survey Statistician with the U.S. Bureau of the Census, where he
served in the division which maintained liaison with the National
Center for Health Statistics. In January, 1971, upon the resignation
of Mr. Peter Ries, Mr. Delk was promoted to Senior Research Asso-
ciate. Because opportunities for deaf persons to acquire experience in
the conduct of social research have been almost nonexistent, the
Census is pleased to have hired Mr. Willis Mann, who recently re-
ceived a Master's Degree in rehabilitation counseling from the Uni-
versity of Maryland and who had graduate course work in social
science research methods. Mr. Mann was employed as Research As-
sistant, in June. Mrs. Mary Jane Rhodes was given the task of
publicizing the Census to obtain cooperation in List Building, a role
she has filled with great vigor and ingenuity. Also during the year
the clerical staff was brought up to full strength.

Mention must be made here of the exceptional service provided on
a parttime, and sometimes gratis, basis by members of the Junior
National Association of the Deaf, students at the Maryland School
for the Deaf, and faculty and students at Gallaudet College. Mr.
Jerald Jordan and Mr. Robert Herbold, Director and Assistant
Director, respectively, of the Gallaudet College Electronic Data Proc-
essing Laboratory, continued as the consultants on computer services,
writing the required programs and supervising the keypunching at
Gallaudet College. Mrs. Betty O'Rourke managed the keypunching
at the Maryland School for the Deaf.

During 1970 the Census added the American Council of Otolaryn-
gology to its list of sponsoring organizations. This addition brings
the list of supporting groups to 19, encompassing nearly every na-
tional professional or lay organization concerned with the problem of
deafness.

B. Public relations

The public relations activities, when viewed over time, resemble a
Gaussian curve: the slope is low at the outset, it rises rapidly to a
peak, and it then falls off rapidly once more to a low level. This is
because the need for intense publicity is concentrated in the middle
period. Too early a campaign would obviously be wasteful, as people
cannot be expected to maintain interest in an activity like the Census
over a long period. Appeals for action are needed as close as possible
to the time when action (i.e., cooperation) is desired. The need for
widespread publicity will be similarly reduced after the Verification
Program, when publication of the findings of the initial phase of the
Census will serve as a substantial incentive to cooperation during the
succeeding personal-interview phase.

An extensive publicity campaign was launched under the direction
of Mrs. Rhodes, ranging from appearances at conventions by Census
staff members to the distribution of posters. Articles were prepared
for and appeared in a variety of publications, lay and professional.
Arrangements were made for mention of the Census in utility com-
pany mail stuffers and in radio and television spot announcements.
Furthermore, direct mail contact was made with leaders of each state
affiliate of the National Association of the Deaf to enlist assistance
with List Building and Verification.

The publicity campaign had two broad objectives: (a) to assist in locating deaf persons and (b) to urge respondents to return the questionnaires they would receive in January, 1971. The latter purpose is especially important in assuring a good mail response to the Verification Program. As evidenced by the results, the List Building was very successful. The publicity campaign doubtless contributed substantially to that success. It is hoped that the actions to encourage return of the mail questionnaires will be equally successful.

Probably the most productive step in the publicity campaign was the meeting on Identification of Black Deaf Persons. Because of the concern that Black and other minority-group deaf persons would be missed, the Census called together leaders of the Black community and persons familiar with Spanish-speaking and low-income deaf persons. The meeting developed a series of recommendations. It is believed that the Census, by following these, will uncover a substantial proportion of the minority-group deaf populations.

It should also be noted that the New York State Temporary Commission on Deafness adopted a resolution officially endorsing the National Census of the Deaf. Similarly, the Mayor of Hampton, Virginia issued an endorsement of the Census, thereby providing widespread publicity throughout that city's government.

C. List Building and Verification

The preliminary closing date for the List Building was December 24, 1970. The total number of unduplicated names on the Name List was 249,882. There are an additional 40,000 students in the Annual Survey of Hearing Impaired Children and Youth (ASHICY), concerning whom appropriate information is available.

Since December 24th, some 17,581 additional names and addresses have been received, and the State of California has informed the Census that its list of approximately 6,000 DVR clients is being prepared for mailing to the Census. There will thus be over 20,000 persons whose names and addresses will have been received by the final closing date of February 1, 1971.

One factor substantially aiding the List Building was a memorandum from Edward Newman, Commissioner of the Rehabilitation Services Administration, to heads of the State Vocational Rehabilitation Agencies. Commissioner Newman's assurances that the Census would maintain strict confidentiality of all information given it and his urging that State vocational rehabilitation agencies cooperate with the Census undoubtedly increased substantially the number of participating groups. The acquisition of the California Department of Vocational Rehabilitation's client list, alone, must be considered a major consequence of the Commissioner's memorandum.

Of the 271,000 or more persons to whom the verification questionnaire will be sent, not all will turn out to be deaf. Indeed, some may not be alive. The Verification Program is intended to determine:

1. Whether the addressee is alive and residing at the address on the Name List
2. Whether the addressee falls within the definition of the target population
3. Whether there are any duplicate entries. Although the computer eliminated all duplications that it could identify, it could

not detect, for example, a woman listed under both her maiden and married names

The Verification Program was pretested in several ways to detect and eliminate any inadequacies in questionnaire design or flaws in the mailing procedures. The detailed report of the pretest procedures which has been prepared offers some assurance of the reliability of this phase of the Census, and will prove helpful in the conduct of similar studies. The principal pretest is described here briefly.

One thousand and forty-three persons were selected for the pretest. They included:

1. 500 distributed across the whole country, of whom 400 were known to be deaf and 100 were drawn at random from telephone directories

2. 238 deaf persons in the Minneapolis-St. Paul area, a sample of whom were interviewed by the National Center for Health statistics in pretesting our Household Survey

3. 305 persons in the State of Maryland, of whom 205 were deaf and 100 were drawn at random from Maryland telephone directories

The pretest consisted of an original mailing of a questionnaire to all participants, and two successive follow-up mailings to those who had not returned questionnaires. In addition, subsamples of respondents and nonrespondents were interviewed.

The original mailing brought a return of 43.7 percent. That figure may be deceptively low, as the Post Office treated some unknown, but large, number of the questionnaires as third-class mail. On the first follow-up, half the nonrespondents were sent a second questionnaire with a covering letter, half received only the questionnaire. The response rates in these two halves were increased by 29.1 and 24.4 percentage points, respectively. The second follow-up varied two conditions: (a) letter or no letter and (b) original or abbreviated form of the questionnaire. The increased response resulting from the various forms of the second follow-up ranged from 5.8 percentage points (no letter, long form) to 13.3 points (letter, short form).

The response rates for the several variations in mailing procedures ranged from 73.9 to 86.1 percent. There was a significant difference between the responses from deaf persons and those of hearing persons. On the original mailing, the response rate for deaf respondents was 46.4 percent, while for the random sample, presumably of hearing persons, the rate was 11.6 percent. There were no significant differences by geographic area.

The pretest was intended to check the questionnaire as well as the mail procedures. Forty personal interviews were conducted in Silver Spring, Maryland, 65 in eastern Maryland, and 36 in Minneapolis, Minnesota. The interviews attempted to elicit misconceptions and attitudes, information about which would assist in redesigning the questionnaire. Some minor details in design were criticized but few difficulties were reported. Of the 14 percent of the interviewees who mentioned some problem in completing the form, over half complained about the type size. Revision of the questionnaire took this and other criticism into account.

The mail returns were also carefully checked for adequacy of response and internal consistency. As a final measure, the firm of Erdos and Morgan, Inc., mail survey specialists, were retained to examine the final draft and suggest any modification that their experience suggested might improve the rate or quality of response. It is believed that the great care exercised in the design of the mail questionnaire and mailing procedures will be reflected in the Census outcome.

The immensity of the Verification Program precluded assembling a special staff to handle it, since the entire operation must be completed in approximately six weeks. To select a contractor for this Program, bids were solicited from concerns with good reputations for processing mass mailings. Several site visits and two months of negotiations resulted in the selection of the Anagram Corporation, Falls Church, Virginia. The Anagram Corporation proved to have extensive computer, printing, mailing, and processing facilities, in addition to an excellent reputation for quality work. The arrangements concluded for the mailing out and processing of returned questionnaires also contained procedures for quality control checks which are essential to assure a high quality result, regardless of the reputation of the contractor.

D. Sample design

Paralleling the Verification Program is the Household Survey, designed to determine the completeness of the Name List by providing an independent estimate of the size of the deaf population. Much attention had been devoted earlier to the problem of obtaining information from a sample of adequate size at a price within the budget of the Census. This problem was resolved when the National Center for Health Statistics agreed to include questions for the Census in the 1971 nationwide Health Interview Survey. At a cost to the Census of no more than half the lowest estimate obtainable, the Health Interview Survey will cover 42,000 households containing more than 150,000 persons. This sample size approaches the 50,000 households specified in Design Number 2 (discussed in the original grant proposal, page 13). The resulting population estimates should then have satisfactory precision.

In August, 1970, the household interview was pretested by the U. S. Bureau of the Census, acting as collecting agent of the National Center for Health Statistics. Interviewer performance was monitored by members of the staff of the National Census of the Deaf, who then met with representatives of the National Center for Health Statistics to resolve observed difficulties. Census staff members also monitored the final training sessions for the Health Interview Survey, in New York.

The Census staff has been well impressed by the provisions for interviewer training and supervision of the National Center for Health Statistics. The several days of training had been carefully prepared and were well administered. Provisions for close supervision were equally impressive. A 234-page Interviewer's Manual for the current Health Interview Survey carried a special 7-page supplement dealing with the questions added for the National Census of the Deaf. The Census staff regards the protracted negotiations which were required to obtain the cooperation of the National Center for Health Statistics as eminently worth-while.

E. Questionnaire design

The Second Annual Meeting on the Census was expanded to include a number of experts on deafness in addition to the members of the Liaison Committee and the National Advisory Council. As reflected in the Proceedings of that meeting, almost the full time was devoted to exploring the question: "What are the topics into which the Census should inquire in its third phase?"

Ten broad areas were specified. The first of these, Communication, was considered so crucial as to be integrally related to each of the remaining nine. The other areas listed were:

Occupational and Vocational Situation
Education and Training
Family Life
Ownership and Consumption
Mobility
Social Life
Political Behavior and Attitudes
Health
Religion

As pointed out above, the next phase of the Census will involve interviews of samples of the deaf population. The list of topics above is being used as a basis for developing the content of the interviews. This phase of the Census is discussed in Section IV of this report.

F. Summary

The first goal of the Census has been achieved with apparently satisfactory results. A National List of Deaf Persons has been compiled, which totals over a quarter of a million names. Adding the ASHICY's figures on children and youth to the names expected after the December 24, 1970, preliminary closing date for list building (17,581 are already on hand at this writing), the grand total awaiting verification is 310,000 names of reported deaf persons. Of course, the Verification Program will discover errors and duplications in the List, but with so large a start there is every reason to anticipate that the Verified List will contain a substantial proportion of all deaf persons in the United States.

The painstaking care with which the Verification Program has been developed in all its aspects—from questionnaire design to quality control of data processing—augurs well for success of this phase of the Census. Similarly, having the expertise of the National Center for Health Statistics provides ample assurance that the Household Survey will be well done.

The Census is proceeding on schedule. While substantial work must be done, there exist no problems not previously overcome in earlier studies by one or more of the Census staff members. There seems no reason to doubt that the next steps in the Census program will be as successful as the first.

IV. PLANS FOR THE NEXT YEAR

In 1971, the Census will be able for the first time to turn major attention from counting deaf persons to learning about their life situations and problems. During this year, Census activities will be divided among the three planned phases, namely:

A. The Verification Program
B. The Household Survey
C. Interviews of Deaf Persons

A. Verification program

This program will be completed in the first half of the year. In that period, a supplementary Name List will be constructed with names received up to February 1, 1971. A mailing and follow-ups to that list will be completed. Returns from the original Name List plus this supplemental one will total, it is estimated, between 200,000 and 250,000. These returns will be used to remove from the Lists duplications and persons not meeting Census criteria. The Verified List will then provide the basis for preliminary information on the distribution and characteristics of the deaf population, and will be the sampling frame from which stratified samples will be drawn for the third phase of the Census; namely, the series of interviews with deaf persons.

B. Household survey

The Health Interview Survey of the National Center for Health Statistics will continue throughout the calendar year to ask questions on behalf of the Census. Plans have been drafted in cooperation with the National Center staff for making comparisons between names of deaf persons identified in the 42,000 household interviews and the anticipated more than 200,000 names on the Census Name List. Such comparisons, however, will not become possible until the calendar year 1972 when the names identified during 1971 will become available. These comparisons will test the adequacy of the Name List; in other terms, the deaf persons found in the house-by-house search will provide an independent estimate of the size of the deaf population. The overlap in timing between the Health Interview Survey and the personal interviews with deaf persons by the Census presents no statistical or logistical problem.

C. Interviews of deaf persons

One of the primary purposes of the Census as stated in Section IB is: "To obtain such information from deaf persons as will lead to a fuller understanding of the deaf adult in the world of work." To achieve this purpose, the major tasks of the 1971 calendar year will be related to personal interviews with deaf persons. This first interview series will focus on two areas of information identified as of major importance by our Second Annual Meeting: (a) the occupational and vocational situation of the deaf and (b) related aspects of their education and training.

The first half of the year will be devoted to a number of activities designed to adapt to this interview series the general practices and procedures of interviewing and the special methods developed for the interviewing of deaf persons. Field work—the actual gathering of data—will begin in the latter half of the year.

1. Interview Content. Within the major topic areas, there are numerous subtopics on which information would be of value. Since not all of these can be covered in this one series of interviews, it has been necessary to select the most important from among them.

It will be important to design these interviews so that the data obtained for deaf persons can be compared with what is known about the education, training, labor-force participation, and work experience of the general population. With this in mind, the task of seeking out and compiling existing data on the general population for purposes of comparison with the deaf population has already been started.

As this compiling of material proceeds, draft questionnaires will be circulated among the members of the Liaison Committee, the National Advisory Council, other experts on deafness, and representatives of the deaf. Their views will be important in shaping the interview content.

2. Plans for Data Analysis. Part of the process of designing the questionnaires is planning the use of the data to be derived from the questions. To avoid asking needless questions and to assure asking those that will be needed, plans for utilization of the data will be made in advance. Such plans will affect not only the selection of questionnaire items and their organization but also the precoding of responses and data-processing plans in general.

3. Pretesting. When the questionnaire is viewed as having essentially its final form, it will be extensively pretested with respondents selected to represent all major segments of the deaf population; for example, those with little education and the better educated, persons at lower and higher income levels, black persons and white, those whose principal mode of communication is oral as well as those oriented to manual communication. Analysis of the pretest results will lead to indicated revisions of the questionnaire draft, with the likelihood of further pretesting before the questionnaire is viewed as in final form.

4. Sample Size and Selection. Interviews will, of course, be conducted with samples of deaf persons identified through the Verification Program. Precise sample sizes will be settled on the basis of the preceding steps. It is evident that persons, not households, will be the sampling units. But information obtained in the Verification Program, geographic and demographic, will be used to stratify the Name List prior to sample selection. One factor affecting the minimum required sample size will be the decisions concerning the complexity of plans for data analysis. Further details of design will be elaborated and the sample drawn in this period.

5. Data Gathering. The greater part of the data will be gathered by personal interviews. Some data, however, might be gathered through the use of a self-administered form, whether delivered by mail or by an interviewer. Such a device can cut costs by reducing interview time. The U. S. Census Bureau sought to use self-enumeration in the 1970 Decennial Census with mixed success. Their experiences will be reviewed in determining how a self-administered form may best be used, if at all.

6. Interviewer Recruitment, Training and Supervision. Interviewing places an unusual burden on this study. Interviewers must be, in effect, bilingual; that is, they must be able to communicate both orally and manually. Moreover, they must understand the language handicaps suffered by many deaf persons. It is anticipated that the Registry of Interpreters for the Deaf, affiliated with the National Association of the Deaf, will be able to identify a sufficient number of

persons to function as interviewers. Recruitment will, therefore, be handled initially through the Registry of Interpreters for the Deaf.

Training will be relatively intensive, since the trainees will include few, if any, who are at all familiar with the requirements of research interviewing. The administration and supervision of the field work will require additions to the Census staff. Rigorous control over the quality of the interviewing will be exercised through close supervision of all field work and the validation of a substantial proportion of the interviews.

V. Research Utilization Aspects

The Census will provide current information about deaf persons—their number, geographical distribution, personal characteristics, work experience, and special problems—which is essential to the planning of programs, facilities, and services. The information will be of value to governmental and voluntary agencies serving the deaf at national, state and local levels, in such fields as rehabilitation, education, manpower training, health, and welfare.

In addition, the Census will have value as a prototype for further studies of the deaf at regional, state, and local levels. The detailed specifications of the National Census of the Deaf will make possible its replication to obtain more precise estimates for smaller areas.

Finally, the procedures developed in this study of the deaf will be applicable to the study of other groups of the disabled. The List Building, Verification Program, Household Survey, and the overall research design and statistical logic will be usable to establish the numbers and characteristics of other handicapped groups.

REPORT OF THE PUBLIC RELATIONS COMMITTEE

The Public Relations Committee has not met as a group, and there is nothing to report at the present time as to the actions of this committee since the meeting held in Florida in 1970. The reason for this lack of action is due to the fact that the constitution and make-up of the Conference is to be changed, and therefore it was necessary to mark time until this is completed.

However, there is a task to be completed. As soon as the Conference decides upon the changes relative to the format of the organization, there will be an immediate need for the publication of a directory of some kind. This should be concise in nature, and one which can be sent to various organizations and groups throughout the world.

Stanley D. Roth, *Chairman.*
Gary A. Curtis
Paul Rudy
Robert S. Brown
Hugo Schunhoff
Audrey Hicks
Henry Minto
Philip A. Bellefleur
Thomas R. Behrens

REPORT OF THE MEETING OF COSD BOARD OF DIRECTORS

Atlantic City, N.J., March 5–6, 1971

Herewith is a report of the deliberations of the Board of Directors of Council of Organizations Serving the Deaf held at Atlantic City, New Jersey on March 5 and 6 as submitted by Stanley D. Roth, representing the Conference of Executives of American Schools for the Deaf along with Joe Youngs.

REPORT OF EXECUTIVE COMMITTEE

I. OFFICE STAFF OF COSD HAS BEEN REORGANIZED

A. Ed Carney is the director, replacing Mervin Garretson.
B. Mrs. Rhodes, was appointed as Assistant to the Director.

II. IN THE DIRECTORS REPORT TO THE BOARD, IT WAS SUGGESTED THAT AS OF JANUARY 1, 1972, THE COMPOSITION OF THE BOARD OF DIRECTORS OF COSD BE CHANGED FROM THAT OF TWO MEMBERS REPRESENTING EACH MEMBER ORGANIZATION SITTING ON THE BOARD, TO THAT OF ONLY ONE MEMBER FROM EACH ORGANIZATION

A. Reasons as outlined:
1. Saving of money in paying transportation and per diem expenses of each Board Member to the Board Members.
2. The government is looking with disfavor on so many members of the board, especially in that the number of the member organizations is increasing.
B. Action:
1. There was quite a bit of discussion relative to this suggestion, and the Board was not ready to take action on it.
2. A motion was made that the President appoint a committee to make a careful study of this resolution, and to report back to the next meeting of the Board.

III. MISCELLANEOUS ACTION AND ANNOUNCEMENTS FROM THE EXECUTIVE COMMITTEE

A. It was reported that the per diem for Board Members would be increased from $20 to $25—starting with the next Board Meeting.
B. The TV committee was dissolved, and a Public Relations Committee appointed.
C. An insurance plan was adopted for the Director of COSD.
D. In order to stay in business, the need was stressed to raise $50,000 as matching funds to that appropriated by the government.
E. COSD feels that there is a great need for better cooperation between COSD and NACED—and the director of COSD is working to that end.
F. 1972 Forum:

1. The 1972 Forum will be held at the Holiday River Manor in Memphis, Tenn., on March 1, 2, 3, 1972.

2. The theme of this Forum will be EDUCATION.

3. Letters will be sent from the Director's office to C.E.D., C.A.I.D., A.G.B., and C.E.A.S.D. asking that these organizations along with N.A.D. be the responsors for the Forum:

(a) The main responsibility of the sponsor is to be responsible for the reception held the first evening.

(b) The cost of this reception runs about $800 (experience of former years), which would mean that each sponsoring organization would be asked for approximately $150.

G. 1973 Forum:

1. The suggested theme for the 1973 Forum is—THE DEAF CHILD'S FAMILY.

2. The place of this Forum will be the responsibility of the Director and the Executive Committee: (a) They will also suggest appropriate dates.

REPORT OF THE LEGAL RIGHTS COMMITTEE, DR. RAY JONES

I. This committee was able to defeat action in Southern California to bar two deaf teachers (Holcomb and Larson) from teaching in a public school situation merely because they were deaf: A. The committee is making a survey of the various states and cities to make sure that deaf teachers will not be barred from teaching in the public schools merely because they are deaf.

II. The Chicago and Los Angeles police departments were sent bulletins which they could use in their orientation lessons in the training of police officers as to how to deal with the deaf.

III. Priorities:

A. Close inspection must be made to make sure that deaf people are not being put into State Hospitals due to communication difficulties: (1) Cases of this kind have been reported.

B. Deaf persons themselves must speak out on problems that exist, and not sit back and let others speak for them:

1. They must share with COSD the problems of their member organizations.

2. Assist in community action, and become actively involved.

C. Leadership training conferences must be held for the average deaf adult.

D. Legislation should be introduced to make interpreters required for all cases involving deaf persons:

1. It is up to the deaf themselves to approach their legislators for this legislation.

2. Many times this carries more weight than if done by others.

3. Only five states have this requirement at the present time.

E. State associations of the deaf must ask for representation on various state committees.

1. Point out the need for representation.

2. It was suggested that Advisory Committees be set up for Schools for the Deaf and deaf people sit on these committees.

F. Monitor new regulations from the Bureau of the Handicapped which discriminate against the deaf in teacher training centers: (1) Apparently, San Fernando Valley is the only training center in the country which accepts deaf candidates.

MISCELLANEOUS ACTION

I. Dues:

A. The increase in dues, which was reported in our report given at the meeting of the Conference in St. Augustine, Fla. will be as follows, if approved by the member organizations: 1971, $150; 1972, $175; 1973, $200.

II. Officers:

President: Emil Ladner
President-Elect: Dave Denton
Vice President: Robert Lauritsen
Secretary: Jess Smith
Treasurer: Don Peterson
New Members of Executive Committee:
  McCay Vernor
  Joe Youngs
  Al VanNevel
Nominating Committee:
  Tracy Huriwitz
  Willis Ethridge
  William Woodrick
  Alex Fleischman
  Rev. Rohe

REPORT OF THE JOINT COMMITTEE ON AUDIOLOGY AND EDUCATION OF THE DEAF

The Committee has not had a meeting since early 1969. This is due to the fact that funds have not been available to support such meetings.

However, two significant things have happened since the last meeting of the Committee: 1) a two week institute on audiology for supervising teachers of the deaf was sponsored by the Committee and hosted by the University of Kansas Medical Center with funding from the Bureau of Education for the Handicapped; and 2) the production of the final report, "A Study of Current Practices in Education for Hard-of-Hearing Children", copies of which are available from the national office of the American Speech and Hearing Association.

It is possible that joint funding from BEH and RSA will provide for another two week institute within the coming year for exposing field audiologists to the world of education of the deaf. In that event monies will again become available for face to face meetings of the Committee.

Some thinking has gone on in the national office of ASHA about expanding the Committee, but this will not be done without full agreement of the existing Committee. Members of the ASHA contingent currently are: Ralph Rupp, Chairman; Mary Manning; June Miller.

REPORT OF COUNCIL ON EDUCATION OF THE DEAF

Ben E. Hoffmeyer, President

The members of the Conference of Executives that serve on the Council are Mr. Lloyd Harrison, Dr. Doin Hicks, Dr. Roy Stelle and Dr. Ben E. Hoffmeyer.

At the annual meeting held February 12, 1971, the following subjects were discussed and were acted on by the Council.

The International Congress

The International Congress on Education of the Deaf is tentatively set for 1975. Japan has indicated an interest in hosting the Congress. Mr. Oosima representing Japan at Sweden is working with Japanese officials and a formal invitation is being formulated.

Survey of Teacher Supply in United States

Dr. Leo Connor conducted a survey to determine the need for the continuation of the present level of teacher training programs funded by the Bureau of Education for the Handicapped.

The survey revealed that approximately 23 percent of the need for fully certified teachers was being met. This information was forwarded to the United States Office of Education.

Articles of Incorporation

The Articles of Incorporation have been completed and this automatically makes the Council on Education of the Deaf officially responsible for Teacher Certification and Teacher Training Accreditation in the education of the deaf.

Preparation and Certification Committee

Dr. Ralph Hoag was requested to report on the work of the Committee. He gave a progress report and had final drafts available for the membership. He also presented a resolution to have the Conference approve their representatives on the Council to vote in favor of these standards as presented. The resolution appears elsewhere in the minutes of the meeting.

PROPOSED STANDARDS FOR THE CERTIFICATION OF TEACHERS OF THE HEARING-IMPAIRED

June 1971

Introduction

The Council on Education of the Deaf, hereafter referred to as the CED, is a national body with representation from the following organizations: The Alexander Graham Bell Association for the Deaf (A. G. Bell), The Convention of American Instructors of the Deaf (CAID), and The Conference of Executives of American Schools for the Deaf (CEASD). The membership of these organizations represents most of the professional personnel engaged in the education of hearing impaired children in the United States. A substantial portion of the educators of hearing impaired children in Canada are also members.

This document presents a two-level program of minimum standards adopted by CED as requirements for the certification of instructional personnel employed in educational programs for hearing impaired children. These supersede requirements established by educators of the deaf prior to 1930, adopted by the Alexander Graham Bell Association for the Deaf in 1930, adopted by the Conference of Executives of American Schools for the Deaf in 1931, and amended in 1952.

These standards were not prepared with any intent to endorse any one method, a combination of methods, or a particular philosophy of teaching as being superior or more productive than another. Rather, every educational program and interested group is encouraged to evaluate and experiment with a variety of methods, procedures, and materials which might lead to improvements in the education of hearing impaired children.

Standards adopted for the certification of professionals in any field of service, to be effective, must include all the practical and workable requirements considered by the profession as essential for the preparation of persons entering and working in the field. Further, they should be designed to serve as guidelines for the upgrading of professional competencies.

The certified teacher must have certain specific competencies that will enable him to provide appropriate educational services in one or more special areas. Specification of these areas provides the essential basis for establishment of a system of professional certification. For the teacher of the hearing impaired, this implies a general competence to identify and evaluate resulting educational problems in all individuals from infancy through adulthood. The certified teacher, then, is expected to have a broad general knowledge of the field, with special abilities as a teacher in at least one area of specialization, and possess at least a baccalaureate degree.

DEFINITIONS

Terms included in the following are those that may have a variety of meanings when found in educational writings and reports. These terms are defined here to clarify the intended meanings as used in this document.

Hearing impaired

A hearing impaired (deaf or hard of hearing) individual is a person who requires specialized education because of a hearing impairment.

Provisional certification

This is the initial level for certification of a teacher of hearing impaired children.

Professional certification

This is the second and highest level of professional certification of a teacher of hearing impaired children.

Areas of specialization

Possible areas of professional specialization for a teacher of the hearing impaired include the following:

PREPRIMARY

Identifies teachers who work with children below the age of six. There are two sub-groups within this area of specialization. These are as follows:

Infants.—Identifies teachers who work with parents and hearing impaired infants in a variety of educational settings

Nursery.—Identifies teachers who work with children between the ages of three and six years in a school setting

ELEMENTARY

Identifies teachers who work with children across broad curriculum areas from the time of the beginnings of formal academic work at approximately the age of six to entrance into a secondary program

SECONDARY (ACADEMIC AREA)

Identifies teachers who teach academic subjects to children beyond the elementary grades (e.g., mathematics, social studies, English, science)

SECONDARY (SPECIAL SUBJECT AREA)

Identifies teachers who teach special subjects other than academic subjects to children beyond the elementary grades (e.g., printing, industrial arts, business education, home economics)

MULTIHANDICAPPED

Identifies teachers who teach hearing handicapped children with additional physical, mental, or emotional handicaps which significantly interfere with educational progress

SPECIAL CONTENT AREA

Identifies a teaching professional or resource teacher who works with hearing impaired children in special curriculum areas that may cross all age levels (e.g., library science, art, speech, media, physical education)

Approved teacher preparation center

An approved teacher preparation center is a college or university whose program leading to provisional and/or professional certification of teachers of the hearing impaired has been approved by the Council on Education of the Deaf.

Practicum

This consists of all aspects of the teacher preparation program including observation, participation, clinical practice, and directed teaching in both classroom and out-of-classroom situations which bring a student into direct contact with hearing impaired children and adults under the direction of qualified instructors, master teachers, and practicum coordinators.

Internship practicum

This refers to paid experience in teaching and working with hearing impaired children under qualified supervision.

Media

This includes all print and non-print materials which are integrated into learning procedures and the general curriculum.

Instructional technology

This is the employment of combined human, mechanical, and technological resources used in all aspects of instruction including design, production, direct use, and evaluation of the teaching and learning processes involved.

Practicum coordinator

This refers to one who holds professional certification by CED directs and supervises the practicum program.

Cooperating teacher

This refers to a teacher with professional certification by CED who has direct supervision of the student teacher during his practicum experience.

PREREQUISITES TO PROVISIONAL CERTIFICATION

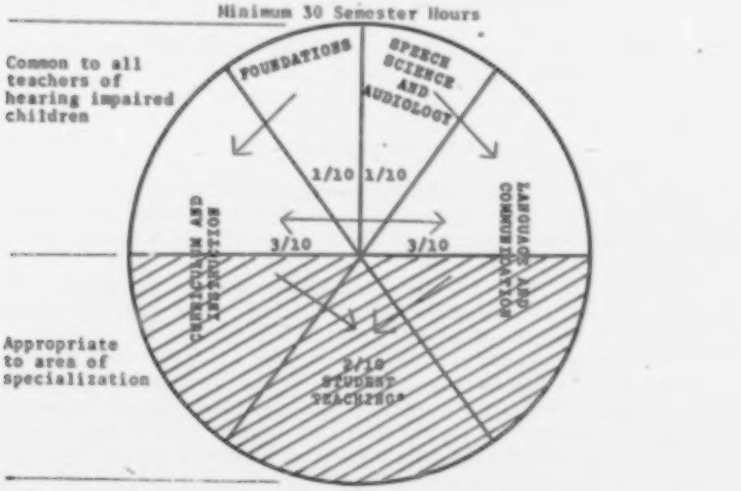
Prerequisite to specific preparation for teaching the hearing impaired in any of the areas of specialization, the candidate should show satisfactory evidence of college study demonstrating that he has a general knowledge of:

1. Child growth and development, learning theory, and general psychology;
2. The development, structure, and function of social institutions including the interaction and interrelationships of these groups in our society;
3. Current instructional procedures in general education;
4. Instructional procedures for the education of handicapped and multihandicapped children.

In addition, the applicant for certification in any area of specialization must have satisfactorily completed the equivalent of a minimum of twenty (20) semester hours in a major area of study directly related to his area of intended specialization.

REQUIREMENTS FOR PROVISIONAL CERTIFICATION

Each applicant for provisional certification as a teacher of hearing impaired children must complete a core program consisting of a minimum of thirty (30) semester hours or its equivalent at an approved preparation center (see Figure I).



*Student Teaching: Total of 250 hours (minimum) at one or more levels

FIGURE I.—*Suggested credit hour allocations for provisional certification.*

Areas of preparation

FOUNDATIONS OF EDUCATION OF THE HEARING IMPAIRED

(a) Philosophical approaches to education of the hearing impaired
(b) Psychological characteristics of deaf and hard of hearing populations
(c) Social adaptation of the hearing impaired
(d) Historical background of the education of the hearing impaired
(e) Present and past trends, problems, and issues in the education of the hearing impaired

SPEECH SCIENCE AND AUDIOLOGY

Study of the physical characteristics of the speech and hearing mechanisms, the physical dimensions of sound, the phycho-acoustic aspects of sound, and the relationships among these areas

LANGUAGE AND COMMUNICATION

Theoretical and practical aspects of the development, evaluation, and improvement of the hearing impaired child's receptive and expressive language and his communication skills

CURRICULUM AND INSTRUCTION

Development and adaptation of curriculum materials and instructional procedures, including the use of media and instructional technology, to fit the special educational needs of hearing impaired children

STUDENT TEACHING

Directed classroom and clinical teaching experience with hearing impaired students under the supervision of a practicum coordinator and/or a cooperating teacher for a minimum of 250 hours at one or more levels

Practicum.—Direct experiences with hearing impaired children and adults as a part of the course of study in all appropriate subject areas in addition to and including student teaching

Internship practicum.—For purposes of CED certification, credit for internship practicum experience may, at the discretion of college or university program sponsors, be granted in lieu of student teaching providing that the experience for such credit follows the completion of coursework required in the program and that the experience is not less than one full year of teaching hearing impaired children under qualified supervision

Requirements for Professional Certification

Each applicant for professional certification must complete a minimum of twenty (20) additional semester hours beyond the provisional level and must complete a minimum of three years of teaching experience under the supervision of a professionally certified educator of the deaf.

Coursework to satisfy the requirement must be taken under the auspices of an approved center as a planned program of study related to an area of specialization and/or related to the general area of education of the hearing impaired. At least nine of these semester hours must be directly related to the education of hearing impaired children. The program may be planned in cooperation with the applicant's employer. Programs so planned may, at the option of the approved center, be partially implemented through work at other accredited colleges and universities (see Figure II).

Minimum 20 Semester Hours

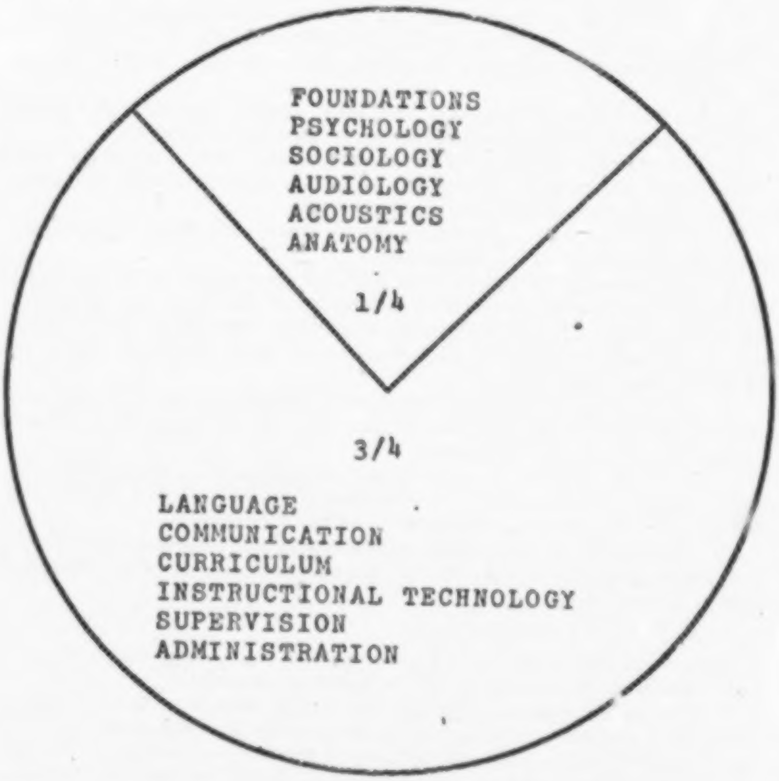


FIGURE II.—*Suggested credit hour allocations of advanced study for professional certification.*

COMPETENCIES AND KNOWLEDGES FOR PROVISIONAL CERTIFICATION

The following is a basic list of special competencies and knowledges in core areas which are considered fundamental for teachers to work effectively with hearing impaired children. It is recognized that the development and evaluation of these skills and knowledge is the responsibility of approved teacher preparation centers.

I. Foundations

The candidate must have:

A. A knowledge of historical and current developments in education of the hearing impaired in the United States and other countries and the influence of historical developments upon the current state of the field;

B. A knowledge of national and local issues, trends, and events which influence the education of hearing impaired children;

C. A knowledge of the purposes and services of national, state, and local organizations and government agencies concerned with the education and welfare of the hearing impaired;

D. A knowledge of national, regional, state, and local educational programs for the hearing impaired;

E. A knowledge of the content and nature, issues, and trends of fields and professions related to education of the hearing impaired, such as regular education, special education, audiology, and educational psychology, and the contributions of these fields to education of the hearing impaired;

F. A knowledge of the implications of hearing impairment for the psychological, sociological, vocational, and educational development of hearing impaired individuals;

G. The ability to utilize educational, sociological, audiological, and psychological information in educational planning and counseling for both hearing impaired children and their parents;

H. The ability to locate and utilize resources, reference, materials, and professional literature in the education of the hearing impaired and in related fields.

II. Speech science and audiology

The candidate must have knowledge of the following areas and their relevance for education of the hearing impaired:

A. The human speech, auditory, and visual mechanisms and related brain and central nervous system structures: the anatomy of these mechanisms, their inter-relatedness, common pathologies affecting these mechanisms, and the functioning of these mechanisms in communicative and other types of behavior in both intact and defective organisms;

B. Production, transmission, and reception of speech sounds and other sounds; physical and psychophysical characteristics of sound; and methods of displaying and graphically representing these characteristics;

C. The general and specific effects of hearing impairment upon the production of speech and the reception of speech and other sounds;

D. Various procedures for testing hearing and interpretation of hearing test results;

E. The functioning and characteristics of various types of amplifying systems and their application to learning and instructional processes.

III. Language and communication

A. LANGUAGE

The candidate must have:

1. A knowledge of the structure of the English language (linguistics), the acquisition and use of language (psycholinguistics), and the implications of these areas for education of hearing impaired infants, children, and young adults;

2. A knowledge of research and other literature on language of the hearing impaired;

3. A knowledge of the acquisition and development of language skills in hearing and in hearing impaired infants and children;

4. A knowledge of disorders of language development;

5. A knowledge of commonly used methods and procedures of language instruction for hearing impaired children;

6. The ability to utilize appropriate instructional procedures to effect language learning in hearing impaired children and the ability to diagnose, correct, and improve language development in these children.

B. COMMUNICATION

The candidate must have:

1. A knowledge of the communication process and the effects of hearing loss on communication;

2. A knowledge of research and other literature on communication of the hearing impaired;

3. An understanding of various modes of communication and combination of modes used in teaching hearing impaired individuals (a. through h. below) and a knowledge of methods, procedures, and materials used in teaching these modes of communication including the use of techniques and materials appropriate to individuals or groups in the development, diagnosis, correction, and improvement of communication ability.

(a) Reading
(b) Written communication
(c) Speechreading
(d) Auditory training
(e) Speech
(f) Fingerspelling
(g) The language of signs
(h) Other modes of communication

IV. Curriculum and instruction

The candidate must have:

A. An understanding of the purpose and the nature of curriculum and an understanding of learning and instructional processes;

B. A knowledge of curriculum and instructional procedures common to education of the hearing impaired and regular education, adaptations of the regular curriculum and instruction for the hearing impaired, and aspects of curriculum and instruction unique to education of the hearing impaired;

C. The ability to plan, implement, and evaluate learning experiences for individuals and groups, including the ability to:

1. Identify learner entry level;
2. Conceptualize and formulate objectives in behavioral terms;
3. Design methods of evaluation based upon measurable objective and utilize data collection procedures;
4. Select design, produce, and utilize media, materials, and resources appropriate to learner behavior and lesson objectives;
5. Implement appropriate instructional procedures;
6. Evaluate learner responses and revise instruction appropriately.

V. Practicum

Through observation, participation, clinical practice, and student teaching, the candidate should have:

A. A knowledge of facilities, services, and programs available for the education and counseling of hearing impaired children and adults;

B. The ability to interact effectively for instructional purposes in a learning situation with hearing impaired individuals or groups at one or more teaching levels;

C. The ability to plan and organize curriculum content in an area of specialization for effective learning by both individuals and groups of hearing impaired children youth.

CERTIFICATION

Two types of certificates for teachers of the hearing impaired may be earned. Each may be awarded under conditions specified below:

Provisional certification

This certificate is issued to applicants who have successfully completed the course and practicum work of the core curriculum for professional preparation as set forth under above Requirements for Provisional Certification and is predicated on the completion of at least a Bachelors degree. The basic certificate is good for a period of five years from date of issuance.

A provisional certificate may be renewed for an additional period of five years upon application and submission of:

A. Evidence of completion of six (6) semester hours applicable toward professional certification;

B. Evidence of completion of at least one year's teaching experience with hearing impaired children.

Professional certification

The professional certificate is issued to teachers who have:

A. Successfully completed the core curriculum for provisional certification;

B. Completed an additional program of advanced study of twenty (20) additional semester hours as described under Requirements for Professional Certification;

C. Completed three years of successful teaching experience under supervision of a qualified professionally certified educator of hearing impaired children.

The professional certificate

The professional certificate is valid for a period of five years from the date of issuance. The candidate for renewal of the certificate must submit evidence of having met at least one of the following conditions:

A. Successfully complete a minimum of three semester hours of course work in areas related to the candidate's field of specialization;

B. Taught the equivalent of a semester course in an area of special education in a college or university;

C. Participated as a panelist, speaker, or served on a committee involved with the program of an international, national, regional, or state convention related to special education;

D. Published in a professional journal.

Previously certified personnel

Teachers currently certified by the CEASD or the CED will upon application automatically receive professional certification under the newly inaugurated program. These standards will apply to all teachers seeking certification by CED as teachers of the hearing impaired.

EFFECTIVE DATE

These standards shall become effective two years from the date of final adoption by the Council on Education of the Deaf. The two-year period following adoption will be devoted to the development of application and program approval processes. All applicants seeking certification under previous CEASD or CED requirements must initiate an application prior to the effective date of the new requirements.

APPROVAL OF PROGRAMS

College or university programs previously reviewed and approved by the CEASD or the CED will continue to be recognized as approved programs by the CED. During the two-year period between the adoption and the effective date of these standards, the Committee on Professional Preparation and Certification will prepare revised program review procedures for new programs and prepare new periodic re-evaluation procedures for on-going and previously approved programs.

Approvals are granted by the CED based on an evaluation of program resources, curriculum, personnel, and practicum facilities. Invitations for program evaluation or re-evaluation may be initiated by a college or university, a department within a college or university, or a previously approved educational program directly affiliated with an accredited institution of higher education.

Previous agreements made between the *National Council for Accreditation of Teacher Education* (NCATE) and the Conference of Executives of American Schools for the Deaf (CEASD) for the review and approval of programs will, with consent of the NCATE, remain in force as the vehicle for approval of programs located in college or university teacher education centers normally reviewed by the NCATE.

PARENT EDUCATION COMMITTEE REPORT

The members of this committee represent a wide range of educational programs in a variety of settings. In general, they expressed strong feelings about getting meaningful and coordinated programs of parent education underway.

Specific recommendations to the Conference are:

1. That the Conference establish a central office, funded by federal grants, to carry out the following tasks—

   (a) prepare information for expectant mothers, which would include simple ways to do some preliminary hearing testing at home and also the names of organizations which offer further information, guidance and even parent training.

   (b) Arrange to place this information in the offices of all obstetricians, pediatricians, general practitioners, and in health clinics.

   (c) Simplify, up-date, and distribute the packet of information for parents which was developed by a previous committee.

   (d) Obtain the assistance of Captioned Films in creating practical and appropriate materials for parent education, both in schools and at home.

   (e) Provide help to schools in organizing and conducting parent education programs.

   (f) Collect and disseminate information about parent education programs to all schools (an example of the need for this is the question from a committee member regarding what is being done *now* for the parents of the 1964 rubella children).

   (g) Disseminate information about programs to the states, the A.M.A. and hospital administrators prior to taking up recommendation No. 3.

2. That the Conference consider ways and means of getting public agencies, such as public school systems, to be responsible for sending a counselor or teacher into a child's home *as soon as a hearing loss has been diagnosed*, to give parents immediate and continuing help in the areas of care, management and communication; make provisions to continue helping the child whenever parents are unable to do so (this came from a committee member working with "inner city" or ghetto homes, and nine of the committee respondents agreed that this type of project is needed).

3. That the Conference begin intensive efforts to "educate" the medical profession about the respective roles of physicians, audiologists and educators, and to get infant hearing testing established as an automatic part of post-natal examinations.

Respectfully submitted,

AUDREY HICKS, *Chairman.*

REPORT OF THE JOINT COMMITTEE ON THE DEAF RETARDED

American Association of Mental Deficiency, Conference of Executives of American Schools for the Deaf

Since the implementation of the Joint Committee on the Deaf Retarded through action of both associations in 1970, considerable action has resulted, primarily through the leadership efforts of Dr. Lyle Lloyd, Chairman of the Joint Committee. Significant programs were presented at the Conventions of the American Association of Mental Deficiency at Houston, Texas, and the American Instructors of the Deaf in Little Rock, Arkansas.

At both meetings, questionnaires were distributed and responses received from those currently involved in and/or concerned with meeting needs of deaf retarded children. These persons represented schools for the deaf or institutions for the retarded, as well as programs outside such agencies. These responses indicated a positive interest on the part of these people in proposed activities of the Joint Committee.

Other concerns evoked by the programs included that of limited support, both moral and financial, for programs for the deaf retarded as exhibited by administrative and legislative bodies. Concern was expressed for competent and intuitive teachers and other personnel who work with the deaf retarded. Types of programs and curricula were described, which reflected a variety of learning activities and the progress resulting therefrom.

The Joint Committee is now developing a prospectus for a 30–48 month program of conferences and discussions, hopefully to receive funding from public or private sources. These conferences will help to identify professionals working in the area of deaf retarded and their programs, to publish bibliographies of significant literature in the field, publication of papers and programs presented at various conventions and conferences, the development of program guidelines and standards and the definition of other specific activities recommended by the conferees.

The Joint Committee met twice during the progress of the Convention of American Instructors of the Deaf. These meetings resulted in recommendations to provide continuous contacts with both organizations through copies of committee correspondence to the respective executive directors. Also, contacts will be made with N. A. C. E. D. and with the President's Committee on Mental Retardation for possible coordination and support for future activities. It is further planned to distribute frequent reports of ongoing activities to all those concerned, including school administrators.

Finally, the Joint Committee earnestly solicits information and inquiries on programs for the deaf retarded from schools and programs for the deaf, as well as those for the retarded. It is their intention to work closely with the American Annals of the Deaf and the Annual Survey of Hearing Impaired Children in their efforts to collect and report data on educational programs for the deaf retarded.

Present:

CEASD—Jack Brady, John Nace, and Lloyd Graunke, Co-Chairman.

AAMD—Nora Burrows, and Lyle Lloyd, Co-Chairman.

By: W. LLOYD GRAUNKE, CEASD, *Co-Chairman.*

CONSTITUTION AND BYLAWS AS APPROVED BY THE CONFERENCE OF EXECUTIVES OF AMERICAN SCHOOLS FOR THE DEAF AT THE 43D MEETING, LITTLE ROCK, ARK., JUNE 26, 1971

ARTICLE I. NAME

Section 1. This organization shall be known as the American Association of Schools for the Deaf, Incorporated, hereafter referred to in this Constitution as the Association.

ARTICLE II. OBJECT

Section 1. The object of this Association shall be to promote the management and operation of schools and other educational programs for the deaf along the broadest and most efficient lines, and to further and promote the general welfare of the deaf.

ARTICLE III. MEMBERS

Section 1. Membership in the Association shall be limited to schools and other educational programs for the deaf as specified in the bylaws. Each program shall be represented by the chief administrator or by his appointee (hereafter referred to as the voting representative).

Section 2. Individuals may be granted Associate membership according to such provision as may be specified in the bylaws.

Section 3. An associate member may participate in the deliberations of the meetings of the Association and may serve on committees other than the Executive Committee. An associate member may vote, only when designated, in writing, as a proxy for a limited time, by the voting representative of a member school or program.

Section 4. Honorary membership may be conferred at any meeting of the Association by a majority vote of the voting representatives present, such membership to continue until terminated by withdrawal or vote of the voting representatives. Honorary members will not be required to pay dues, and do not vote.

Section 5. Member organizations shall pay dues as prescribed in the bylaws. Voting shall be restricted to member organizations for which dues have been paid.

ARTICLE IV. OFFICERS AND THE EXECUTIVE COMMITTEE

Section 1. The elected officers of the Association shall be a president, a president-elect, a secretary and a treasurer. The officers together with nine elected voting members and the immediate past president, shall constitute the Executive Committee.

Section 2. The terms of the officers shall be two years, beginning July 1 of the even-numbered years. The president-elect shall be the nominee for president.

Section 3. The immediate past president shall become a member of the Executive Committee for a term of two years. The elected members of the Executive Committee shall serve for terms of three years, three being elected each year at the regular meeting of the Association, and taking office on July 1, following.

Section 4. The president shall be the chairman of the Executive Committee.

Section 5. Officers may not succeed themselves but may be elected to other offices, or to the same office after a lapse of two years. In the case of a vacated office, the Executive Committee shall elect a new officer for the unexpired term.

Section 6. The Executive Committee may appoint a financially compensated executive manager to serve the Association, to perform such duties as the Committee may prescribe. He shall hold a regular membership in the Association. He shall be the custodian of records of the Association.

ARTICLE V. DUTIES OF OFFICERS AND EXECUTIVE COMMITTEE MEMBERS

Section 1. President: The president shall preside at the meetings of the Association and of the Executive Committee and shall have general care and oversight of the affairs of the Association subject to the approval of the Executive Committee.

Section 2. President-Elect: In the absence or disability of the president the president-elect shall discharge the duties of the president and in the absence or disability of both the Executive Committee may choose a qualified member to serve as the presiding officer. He shall also serve as Program Committee Chairman.

Section 3. Secretary: The secretary shall keep records of the meetings of the Association and of the Executive Committee and perform such other secretarial duties as may be required.

Section 4. Treasurer: The treasurer shall collect all dues and assessments and shall have custody of the funds and securities of the Association under control of the Executive Committee. He shall keep proper books and accounts of the receipts and disbursements of the moneys of the Association and shall report as to the financial condition of the Association at each annual meeting or as often as requested by the Executive Committee. The treasurer shall pay out of the money of the Association only in accordance with the regulations or instructions of the Executive Committee and invest surplus funds subject to the approval of the Executive Committee.

Except that, while the Executive Committee operates a national office headed by an appointed executive officer, the functions and controls formerly assigned to the treasurer are transferred to the executive officer of the national office. In this situation the treasurer shall retain membership on the Executive Committee and serve as chairman of an auditing committee.

Section 5. The Executive Committee shall have charge of the affairs of the Association between meetings. The Executive Committee shall be governed by such bylaws as are adopted by the Association and shall submit a report of its activities at each annual meeting.

Section 6. Meetings of the Executive Committee may be called by the president or upon the request of four members of the Committee. Written notice of such meetings shall be given thirty days in advance. Where a quorum of the Association cannot be obtained, a written poll of the members may be substituted.

Section 7. A quorum of the Executive Committee shall consist of a simple majority of the members of the Committee.

Section 8. All officers and members of the Executive Committee must be voting representatives in the Association.

Article VI. Meetings

Section 1. Regular meetings of the Association shall be held annually at a time and place designated by the Association in session or by the Executive Committee. Notice of all meetings must appear in the *American Annals of the Deaf* at least sixty days in advance of the meetings or sent in writing to each member sixty days in advance of the meeting.

Section 2. A quorum shall consist of thirty voting representatives.

Article VII. Amendments

Section 1. This Constitution may be amended by the affirmative vote of at least three-fourths of the voting representatives present at any regularly called meeting, at which at least fifty voting representatives are present, provided thirty days notice of the meeting with publication of the proposed amendment shall appear in the official organ of the Association.

Article VIII. Bequests

Section 1. The Executive Committee is authorized to accept at its discretion gifts and bequests in behalf of the Association.

BYLAWS

Article I. Membership

Section 1. Membership in the Association shall be considered that of a school or program rather than the individual. A school or program shall be eligible for representation during the period for which dues are paid.

Section 2. At each regular meeting the secretary shall cause to be posted in a conspicuous place, or circulated to all members attending, a list of names of all voting representatives of member programs, and another list of qualified associate members in good standing.

Section 3. To qualify for membership a school or program must be directly related to education of the deaf, under the direction of one administrator, and be approved by the Membership Committee.

A school (or school program), to qualify, must have at least five well-graded classes or a minimum of five full-time teachers of hearing impaired students under one administrator.

A program, to qualify, must contribute substantial services to education of the deaf. Such programs should ordinarily have five full-time professional employees or the equivalent working with hearing impaired persons, and should not be an integral part of a larger program already holding membership in the Association. Examples of such programs might include the following: Research and Development for Hearing Impaired; Regional Media Center for the Deaf; Professional Training Programs in the area of Hearing Impaired; Diagnostic Centers for Hearing Impaired; Speech and Hearing Centers; Statewide Rehabilitation Programs for Hearing Impaired; Department of Special Education.

Final determination as to program eligibility rests with the Membership Committee.

In addition to the above, government offices having broad national and regional responsibilities in the area of the deaf may be eligible for membership.

Section 4. Associate membership in the Association may be granted to professional personnel in member programs upon nomination by the voting representative, approval of the Membership Committee, and payment of the annual dues.

Associate membership may be granted to professional personnel of special services and agencies dealing with the deaf, upon nomination by a voting representative from the same state, province or the District of Columbia, approval by the Membership Committee, and payment of the annual dues.

Section 5. Annual dues for schools and programs and for associate members shall be in such amounts as are recommended by the Executive Committee and approved by the Association.

ARTICLE II. OFFICERS, COMMITTEES, AND AFFILIATIONS

Section 1. Only voting representatives in good standing shall be eligible for election to offices or membership on the Executive Committee. In the event that an irregularity is found a vacancy shall be declared.

Section 2. The president shall appoint a Nominating Committee of five qualified members, not less than six months prior to the next scheduled election, to prepare a slate of elective officers and Executive Committee Members. This slate shall be presented at the meeting during which the election is to take place. Nominations may be made from the floor. In the event of there being more than one nominee written ballots shall be cast and the member receiving a simple majority of the votes shall be declared elected. In case no majority is recorded on the first ballot, a second ballot shall be provided on which only names of the two having the largest number of votes on the previous ballot shall appear. In case of tie vote for the first or second place on the ballot, the names of all candidates involved in such a tie shall be included. Subsequent ballots, if necessary, are to be governed by similar regulation.

Section 3. The authority for the general management of the Association between meetings, granted to the Executive Committee in the Constitution, shall include the initiation of research and other professional activities in which the welfare of the deaf is involved.

Section 4. There shall be the following standing committees:

1. Accreditation of Schools
2. Dormitory Counselors—Training and Certification
3. Educational Research
4. Higher Education
5. Interagency
6. Legislation
7. Membership
8. Multiply Handicapped
9. Parent Education
10. Program
11. Public Relations
12. Resolutions
13. Statistics
14. Vocational Education

The standing committees identified above may consist of not less than three members. They shall be appointed by the president for the term of his office.

The chairman of the Membership Committee shall be selected from the Executive Committee.

Other Committees shall have appointed by the President liaison persons from among the Executive Committee to assist them with their work and reporting functions.

There shall be participation by the Association in joint standing committees as follows:

15. Joint Administrative Committee, *American Annals of the Deaf.*
16. Joint Committee on Mental Retardation and Education of the Deaf.
17. Joint Committee on Education of the Deaf and Audiology.
18. Joint Committee on the Education of the Deaf-Blind.

The Joint Administrative Committee, *American Annals of the Deaf*, shall consist of three members representing the Association, appointed by the president, to serve with representatives of the Convention of American Instructors of the Deaf. The president of the Association shall name the chairman of the Committee.

The Committee shall be responsible for the management and fiscal control of the *American Annals of the Deaf*, and shall elect its editor(s) who shall perform such duties as may be prescribed. The Committee chairman shall keep the sponsoring organization informed as to progress, problems and related matters.

The Joint Committee on Mental Retardation and Education of the Deaf shall consist of 3 members representing the Association, appointed by the President, to serve with representatives of the American Association of Mental Deficiency.

The Joint Committee on Education of the Deaf and Audiology shall consist of 3 members representing the Association, appointed by the President, to serve with the American Speech and Hearing Association.

The Joint Committee on the Education of the Deaf-Blind shall consist of two members appointed by the President to serve on the National Committee on Services for Deaf-Blind Children with representatives from American Association for the Visually Handicapped.

The president may appoint such special committees as may be indicated with the approval of the Executive Committee.

Section 5. The President, together with 3 voting representatives of the Association, shall serve on the Executive Board of the Council on Education of the Deaf. The President shall appoint representatives of the Association to this board for a term of 3 years as vacancies occur.

ARTICLE III. RECORDS OF MINUTES, AND PUBLICATION OF OFFICIAL PROCEEDINGS

Section 1. The secretary shall be responsible for securing minutes of various business sessions and a record of the proceedings of all sessions, and shall arrange for an adequate report of such proceedings to be printed and distributed in such manner as the Executive Committee shall determine.

ARTICLE IV. OFFICIAL SEAL

Section 1. The seal of the organization shall be permanently retained in offices designated by the Executive Committee.

ARTICLE V. PROCEDURE OF MEETING

Section 1. Robert's Rules of Order shall govern all proceedings not herein provided for.

VI. AMENDMENTS TO BYLAWS

Section 1. The bylaws may be amended by a majority vote at any regular meeting provided the presentation of the change has been approved by the Executive Committee.

[illegible]RTICLE VII. BYLAWS BECOME EFFECTIVE

Sectio[illegible]se bylaws shall become effective immediately upon their adoption.

MEETINGS OF THE CONFERENCE OF EXECUTIVES OF AMERICAN SCHOOLS FOR THE DEAF

1868 1st: Gallaudet College, Washington, D.C.
1872 2nd: Michigan School for the Deaf, Flint, Michigan
1876 3d: Mount Airy School for the Deaf, Philadelphia, Pa.
1880 4th: The Clarke School for the Deaf, Northampton, Mass.
1884 5th: Minnesota School for the Deaf, Faribault, Minn.
1888 6th: Mississippi School for the Deaf, Jackson, Miss.
1892 7th: Colorado School for the Deaf and the Blind, Colorado Springs, Colorado
1900 8th: Alabama School for the Deaf, Talladega, Ala.
1904 9th: Department of International Congresses of the Universal Exposition, Halls of Congresses on the Exposition Grounds, St. Louis, Mo.
1913 10th: Indiana School for the Deaf, Indianapolis, Ind.
1919 11th: Ohio School for the Deaf, Columbus, Ohio
1924 12th: Florida School for the Deaf and the Blind, St. Augustine, Fla.
1926 13th: Maryland School for the Deaf, Frederick, Md.

1928 14th: Tennessee School for the Deaf, Knoxville, Tenn.
1930 15th: Colorado School for the Deaf, Colorado Springs, Colo.
1933 16th: New Jersey School for the Deaf, West Trenton, N.J.
International Congress on the Education of the Deaf.
1936 17th: Western Pennsylvania School for the Deaf, Edgewood, Pittsburgh, Pennsylvania
1939 18th: Gallaudet College, Washington, D.C.
1944 19th: Western Pennsylvania School for the Deaf, Edgewood, Pittsburgh, Pennsylvania
1948 20th: Minnesota School for the Deaf, Faribault, Minnesota
1949 21st: Illinois School for the Deaf, Jacksonville, Ill.
1950 22d: Colorado School for the Deaf, Colorado Springs, Colo.
1951 23d: Missouri School for the Deaf, Fulton, Mo.
1952 24th: Arkansas School for the Deaf, Little Rock, Ark.
1953 25th: Washington School for the Deaf, Vancouver, Wash.
1954 26th: New Mexico School for the Deaf, Santa Fe, N. Mex.
1955 27th: American School for the Deaf, West Hartford, Conn.
1956 28th: Mississippi School for the Deaf, Jackson, Mississippi
1957 29th: Tennessee School for the Deaf, Knoxville, Tennessee
1958 30th: Clarke School for the Deaf, Northampton, Massachusetts
1959 31st: Colorado School for the Deaf, Colorado Springs, Colorado
1960 32d: Northwestern University, Evanston, Illinois
1961 33d: Oregon School for the Deaf, Salem, Oregon
1962 34th: Texas School for the Deaf, Austin, Texas
1963 35th: Manger Hamilton Hotel, Washington, D.C.
1964 36th: California School for the Deaf, Riverside, California
1965 37th: Pick-Durant Hotel, Flint, Michigan
1966 38th: Velda Rose Towers, Hot Springs, Arkansas
1967 39th: American School for the Deaf, West Hartford, Conn.
1968 40th: Gallaudet College, Washington, D.C.
1969 41st: California School for the Deaf, Berkeley, California
1970 42nd: Florida School for the Deaf and Blind, St. Augustine, Fla.
1971 43d: Arkansas School for the Deaf, Little Rock, Arkansas

PUBLISHED PROCEEDINGS OF THE CONFERENCE OF EXECUTIVES OF AMERICAN SCHOOLS FOR THE DEAF, 1868–1969

1868 Volume I: 1st meeting, 11th Annual Report of the Columbia Institution for the Deaf and Dumb (Gallaudet College), Washington, D.C.
1872 Volume II: 2nd meeting, 10th Biennial Report of the Board of Trustees of the Michigan Institution for the Education of the Deaf, Dumb, and Blind, Flint, Mich.
1876 Volume III: 3rd meeting, American Annals of the Deaf, No. 4, Mount Airy School for the Deaf, Philadelphia, Pa.
1880 Volume IV: 4th meeting, Stream Press of Gazette Printing Co., Northampton, Mass., Clarke School for the Deaf, Northampton, Mass.
1884 Volume V: 5th meeting, Biennial Report of the Minnesota School for the Deaf, Pioneer Press Co., St. Paul, Minn.
1888 Volume VI: 6th meeting, Clarion-Ledger Printing Establishment, Jackson, Miss., Mississippi School for the Deaf.
1892 Volume VII: 7th meeting, Colorado School Printing Office, Colorado Springs, Colo. Proceeding published in 1893.
1900 Volume VIII: 8th meeting, Alabama Institute for the Deaf Printing Office, Talladega, Ala.
1904–50 Volume IX–XXII: 9th to and including the 22nd Proceeding were published in the American Annals of the Deaf.
1951 Volume XXIII: 23rd meeting, Missouri School for the Deaf. The minutes were published in the proceedings of the Convention of American Instructors of the Deaf.
1952 Volume XXIV: 24th meeting, Arkansas School for the Deaf, Little Rock, minutes were mimeographed.
1953 Volume XXV: 25th meeting, Washington School for the Deaf, Vancouver, Wash. Minutes were published in the Proceedings of the Convention of American Instructors of the Deaf.
1954 Volume XXVI: 26th meeting, New Mexico School for the Deaf, Santa Fe, N. Mex. Minutes were mimeographed.

1955 Volume XXVII: 27th meeting, American School for the Deaf, West Hartford, Conn. Minutes were published in the Proceedings of the Convention of the American Instructors of the Deaf.

1956 Volume XXVIII: 28th meeting, Mississippi School for the Deaf, Jackson, Miss. Minutes were mimeographed.

1957 Volume XXIX: 29th meeting, Tennessee School for the Deaf, Knoxville, Tenn. Minutes were published in the Proceedings of the Convention of the American Instructors of the Deaf.

1958 Volume XXX: 30th meeting, the Clarke School for the Deaf, Northampton, Mass. Minutes were mimeographed

1959 Volume XXXI: 31st meeting, Colorado School for the Deaf, Colorado Springs, Colo. Minutes were published in the Proceedings of the Convention of the American Instructors of the Deaf.

1960 Volume XXXII: 32nd meeting, Northwestern University, Evanston, Ill. Minutes were mimeographed.

1961 Volume XXXIII. 33d meeting, Oregon School for the Deaf, Salem, Oregon. Minutes were published in the Proceedings of the Convention of the American Instructors of the Deaf.

1962 Volume XXXIV: 34th meeting, Texas School for the Deaf, Austin, Texas. Minutes were lithographed.

1963 Volume XXXV: 35th meeting, Manager Hamilton Hotel, Washington, D.C. This meeting was held in conjunction with the International Congress on the Education of the Deaf and the minutes are to be published in the Proceedings of the International Congress on the Education of the Deaf.

1964 Volume XXXVI: 36th meeting, California School for the Deaf, Riverside, California. Minutes were lithographed.

1965 Volume XXXVII: 37th meeting, Pick-Durant Hotel, Flint, Michigan. Minutes were published in the Proceedings of the Convention of the American Instructors of the Deaf.

1966 Volume XXXVIII: 38th meeting, Velda Rose Towers, Hot Springs, Arkansas. Minutes were lithographed.

1967 Volume XXXIX: 39th meeting, American School for the Deaf, West Hartford, Conn. Minutes were published in the Proceedings of the Convention of the American Instructors of the Deaf.

1968 Volume XL: 40th meeting, Gallaudet College, Washington, D.C. Minutes were lithographed.

1969 Volume XLI: 41st meeting, California School for the Deaf, Berkeley. Minutes were published in the Proceedings of the Convention of American Instructors of the Deaf.

1970 Volume XLII: 42nd meeting, Florida School for the Deaf and the Blind, St. Augustine. Minutes were lithographed.

1971 Volume XLIII: 43rd meeting, Arkansas School for the Deaf, Little Rock. Minutes were published in the Proceedings of the Convention of American Instructors of the Deaf.

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